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1976 RESULTS

PHENOLOGY AND PRODUCTION STUDIES ON SEMI-ARID SHRUB TYPES

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PHENOLOGY AND PRODUCTION STUDIES ON SEMI-ARID SHRUB TYPES[1]

1976 ANNUAL PROGRESS REPORT

BY

H. G. Fisser, L. W. Young, J. E. Orpet, and N. E. Hargis[2]

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[1] Published with the approval of the Director, Wyoming Agricultural Experiment Station, as Scientific Report No. 930.

[2] Professor of Range Management and Graduate Research Assistants, Division of Range Management, University of Wyoming, Laramie, respectively.

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SECTION I

PHENOLOGY STUDY

1976

Introduction

Phenological study of important plant species in terms of productivity and microenvironmental variations will provide information that can be used to increase the efficiency of Bureau decision making with respect to management alternatives and disposition of natural resource areas.

Phenology studies of important shrub and grass species will provide detailed biological information related to specific changes in environmental characteristics such as time, duration, temperature, and movement. Very little detailed phenology and productivity information is available for arid land species of the western United States. Basic scientific knowledge and more precise information related to the Bureau's multiple resource management techniques will be enhanced by this phenology study.

Artemisia tridentata, *Artemisia nova*, *Agropyron smithii*, and *Agropyron spicatum* are the major shrub and grass species in the intermountain region on semi-arid, low elevation grazing ranges of public land. These species are especially important in the semi-arid regions of the western half of Wyoming from the Montana border on the north and the Utah and Colorado borders on the south. Their importance in adjacent states is equally significant. The ecological divergence of these four species is very great. They are found from high elevations to very low elevations, and from mesic to xeric situations. Therefore, these four species, in the development of the cooperative research program between the Bureau of Land Management and the University of Wyoming, were selected for intensive studies; to determine interrelationships of phenology, production, environment and utilization. These kinds of data are of major importance to the BLM for development of efficient and sound resource management decisions.

Intensive phenological studies were located on 12 selected exclosure areas. First level evaluation areas are: Demer exclosure, Farson exclosure, Horse Creek exclosure, Shoshoni Ant #7 exclosure, and Sweetwater exclosure. Second level evaluation areas are: Bud Kimball exclosure, Cedar Mountain exclosure, Cumberland #3 exclosure, Mesa Antelope exclosure, Owl Draw exclosure, Red Wash #2 exclosure and Upper Gov't. Draw exclosure.

Phenophase descriptions and stages with numerical scales were set up for four specific plant species: *Agropyron smithii*, *A. spicatum*, *Artemisia nova*, and *A. tridentata*, plus one phenological inventory for all plant species. Seasonal development (March-December) was recorded for 100 plant species in 12 exclosure areas. Individual plants of the four principal species in each of the 12 selected exclosure areas were permanently located for repeated observation.

Plans for 1977 call for a continuation of data collection. Criteria for environmental data will be established, and the data collected. There will be continued revision and sophistication of present numerical descriptions of plant growth characters. Statistical and computer analysis of the several environmental factors, productivity and plant growth will be devised and implemented. Soil characteristics of each study site will be included in the analyses as variables to determine their relationships to the phenodynamics of the involved plants.

Objectives

The objectives of the study are to determine:

(1) the relationship of phenodynamics with vegetation production and environmental data;

(2) relationships of phenodynamics and environmental characteristics to grazing and management procedures.

Methods and Procedures

Twenty individual plants of each of the four principal species were permanently located along a 100 foot line in 12 exclosures. Every 5 ft. on the line, directions along and from the line for the closest plant were recorded.

Phenological measurements of *Artemisia nova* and *A. tridentata* included plant size, age, vegetative stages of growth with twig length, and reproductive stages of flowering and seed ripening with seed stalk length. Phenological measurements of *Agropyron smithii* and *A. spicatum* included plant size, age, vegetative stages of growth with leaf width and height; reproductive stages with spike height, number of spikelets per seed head and seed head development.

Phenological stages and numerical scores for shrubs and forbs are:

1. = initial start of growth of the plant;
2. = early vegetative growth -- the new leaves are developing and elongating;
3. = immature vegetative growth -- the new twigs are elongating;

4. = full vegetative growth -- the leaves and twigs are fully developed;
5. = floral bud stage -- the first buds begin development to the initiation of bloom;
6. = early bloom -- includes the initiation of bloom to 10% bloom;
7. = mid-bloom -- includes 10% to 75% of bloom;
8. = full-bloom -- includes 75% bloom to 100% bloom;
9. = late bloom -- the flowers are drying and seeds are beginning to form;
10. = milk stage -- the seeds are soft and immature (not well-formed);
11. = dough stage -- the seed is well-formed but still soft;
12. = ripe seed -- the seed is mature and hard;
13. = past ripe -- the seed is ripe but not shattered, and reproductive parts of the plant (seed, stalk, etc.) are mature, and are beginning to weather;
14. = mature vegetative -- the vegetative parts are beginning to brown to complete browning;
15. = mature reproductive -- the reproductive parts are curing (stem, leaf and seeds are shattering);
16. = fall regreening -- and/or leaf shed;
17. = winter dormancy.

The plant age classes of shrubs are classified as:

1. = seedling;
2. = young and small;
3. = intermediate age and size;

4. = mature age and size;
5. = old and decadent.

The phenological stages and numerical scores for grasses are:

1. = first leaf stage -- from the appearance of first leaf to appearance of second leaf;
2. = second leaf stage -- from the appearance of second leaf to appearnace of third leaf;
3. = third leaf stage -- from the appearance of the third leaf to appearance of the fourth leaf;
4. = fourth leaf development -- from the appearance of the fourth leaf to full leaf development;
5. = boat stage -- the seed stalk is elongating and the noticeable swelling of the seed head in boot;
6. = seed head emergence -- from the beginning of emergence of the seed head to the start of anthesis;
7. = early anthesis -- from initiation of anthesis to 10% of florets in bloom;
8. = mid-anthesis -- from 10% florets in bloom to 75% of florets in bloom;
9. = full anthesis -- 75% and more of the florets in bloom;
10. = the seed is soft and immature (not well-formed);
11. = dough stage -- the seed is well-formed but still soft;
12. = ripe seed -- the seed is well-formed and hard;
13. = past ripe -- the reproductive parts begin to weather;
14. = vegetative parts browning;
15. = reproductive parts curing -- stems, leaves and seeds cast;

16. = fall regreening -- with adequate fall moisture and temperature there is fall regrowth;

17. = winter dormancy.

The maturity of Agropyron spicatum clumps are classified as: (a) seedling, (b) young, (c) intermediate, (d) mature, and (e) old. Each maturity classification can then be designated as: (a) sparse, (b) intermediate, (c) dense and (d) decadent.

1976 Results

An alphabetical listing of each study exclosure, the county where located and the principal phenology species is shown in Table I. Table II is an alphabetical listing of 127 species found in the 12 phenology study exclosures. A phenological inventory of all species by date for each exclosure is given in Table III. Table IV is the intensive phenological survey of the prime species for each exclosure. Table V is the date for the three major phenological growth stages for all species. Figure 1 shows the phenological development averages for 1976 for the four principal species in all of the study areas. Figure 2 shows the phenological progression curves for each of the principal species for 1973 through 1976. Table VI is a list of the 17 independent variables and one dependent variable used in the step-wise multiple regression analysis. Table VII is the simple matrix of all independent and dependent variables for each of the four species. Table VIII is a listing of the significant simple correlation coefficients between various independent variables for the four species.

Growth initiation, full bloom and start of seed dissemination for 1976 was compared with the three previous years. Comparison of AGSM showed a later initiation of plant growth which progressed to an earlier seed maturity and plant drying. The floral bud stage for ARTR appeared later but full bloom to seed maturity occurred earlier.

In 1976 Agropyron smithii in the southwestern part of the state; Cedar Mountain, Cumberland 3 and Mesa Antelope, full bloom occurred earlier than the exclosures in the Big Horn Basin. At these exclosures floral bud stage and full bloom was 15-20 days later.

The average growth stage of Agropyron spicatum was the same at all exclosures except Owl Draw, where the floral bud stage through full bloom was nearly a month later.

Exclosures in the Big Horn Basin showed a two week earlier floral bud stage for Artemisia tridentata. Full bloom for Artemisia nova occurred 10-15 days earlier at Horse Creek and Sweetwater.

At the Demer Exclosure to the east of the Big Horn River on July 28, 1976, sagebrush leaves were still quite green and growing well, while at other locations, especially in southern and western Wyoming, most leaves of sagebrush were fading in color and often shedding earlier than the previous year.

TABLE I. Alphabetical listing of study areas, the county where each occurs, and the principle species.

Exclosure Name	County	Principle Species
Bud Kimball	Washakie	Agropyron smithii Artemisia tridentata
Cedar Mountain	Sweetwater	Agropyron spicatum Artemisia tridentata
Cumberland #3	Lincoln	Agropyron smithii Agropyron spicatum Artemisia tridentata
Demer	Washakie	Agropyron smithii Agropyron spicatum Artemisia tridentata
Farson	Sweetwater	Agropyron smithii Artemisia tridentata
Horse Creek	Big Horn	Agropyron smithii Agropyron spicatum Artemisia nova Artemisia tridentata
Mesa Antelope	Sublette	Agropyron smithii Artemisia tridentata
Owl Draw	Natrona	Agropyron smithii Agropyron spicatum Artemisia nova Artemisia tridentata
Red Wash #2	Sweetwater	Agropyron smithii Agropyron spicatum Artemisia tridentata
Shoshone Ant #7	Fremont	Agropyron smithii Artemisia tridentata
Sweetwater	Fremont	Agropyron smithii Artemisia nova Artemisia tridentata
Upper Gov't. Draw	Fremont	Agropyron smithii Artemisia tridentata

TABLE II. List of plant names which occurred in phenology study areas.

Code	Genus-Species	Common Name	Life Form	Longevity
ACLA	Achillea lanulosa	Western yarrow	Forb	Perennial
AGCR	Agropyron cristatum	Crested wheatgrass	Grass	Perennial
AGGL	Agoseris glauca	Pale agoseris	Forb	Perennial
AGSM	Agropyron smithii	Western wheatgrass	Grass	Perennial
AGSP	Agropyron spicatum	Bluebunch wheatgrass	Grass	Perennial
ALTE	Allium textile	Textile onion	Forb	Perennial
AMAL	Amelanchier alnifolia	Saskatoon serviceberry	Shrub	Perennial
ANDI	Antennaria dimorpha	Low pussytoes	Forb	Perennial
ANRO	Antennaria rosea	Rose pussytoes	Forb	Perennial
ARCO	Arenaria congesta	Ballhead sandwort	Forb	Perennial
ARFE	Aristida fendleriana	Fendler three-awn	Grass	Perennial
ARFR	Artemisia frigida	Fringed sagewort	Half-shrub	Perennial
ARHO	Arenaria hookeri	Hooker sandwort	Forb	Perennial
ARHO^{2}	Arabis holboellii	Holboell rockcress	Forb	Perennial
ARLI	Arabis lignifera	Woody rockcress	Frob	Perennial
ARNO	Artemisia nova	Black sagebrush	Shrub	Perennial
ARSP	Artemisia spinescens	Bud sagewort	Half-shrub	Perennial
ARTR	Artemisia tridentata	Big sagebrush	Shrub	Perennial
ASCA	Aster canescens	Hoary aster	Forb	Perennial
ASCI	Astragalus cibarius	Silky milkvetch	Forb	Perennial
ASDI	Astragalus diversifolius	Meadow milkvetch	Forb	Perennial
ASDR	Astragalus drummondii	Drummond milkvetch	Forb	Perennial
ASKE	Astragalus kentrophyta	Kentrophyta milkvetch	Forb	Perennial
ASMI^{2}	Astragalus miser	Timber milkvetch	Forb	Perennial
ASMI	Astragalus missouriensis	Missouri milkvetch	Forb	Perennial
ASPV	Astragalus purshii	Pursh loco	Forb	Perennial
ASSP	Astragalus spatulatus	Tufted milkvetch	Forb	Perennial
AST	Astragalus spp.	Milkvetch	Forb	Perennial
ATCO	Atriplex confertifolia	Shadscale saltbush	Shrub	Perennial
ATGA	Atriplex gardneri	Gardner saltbush	Half-shrub	Perennial
BASA	Balsamorhiza sagittata	Arrowleaf balsamroot	Forb	Perennial
BOGR	Bouteloua gracilis	Blue grama	Grass	Perennial
BRCO	Bromus commutatus	Hairy chess	Grass	Annual
BRTE	Bromus tectorum	Cheatgrass brome	Grass	Annual
CAAN	Castilleja angustifolia	Narrowleaf Indianpaintbrush	Forb	Perennial
CACH	Castilleja chromosa	Desert Indianpaintbrush	Forb	Perennial
CAEL	Carex eleocharis	Needleleaf sedge	Sedge	Perennial
CAFI	Carex filifolia	Threadleaf sedge	Sedge	Perennial
CANU	Calochortus nuttallii	Sego mariposalily	Forb	Perennial
CAS	Castilleja spp.	Paintbrush	Forb	Perennial
CHDE	Chenopodium dessicatum	Desert goosefoot	Forb	Annual
CHDO	Chaenactis douglasii	Douglas dustymaiden	Forb	Perennial
CHFR	Chenopodium fremontii	Fremont goosefoot	Forb	Annual
CHNA	Chrysothamnus nauseosus	Rubber rabbitbrush	Shrub	Perennial
CHVI	Chrysothamnus viscidiflorus	Douglas rabbitbrush	Shrub	Perennial
CIR	Cirsium spp.	Thistle	Forb	Perennial

TABLE II. Continued

Code	Genus-Species	Common Name	Life Form	Longevity
COPA	Comandra pallida	False toadflax	Forb	Perennial
CORA	Cordylanthus ramosus	Branched birdbeak	Forb	Perennial
CRAC	Crepis acuminata	Tapertip hawksbeard	Forb	Perennial
CRBR	Cryptantha bradburiana	Miners candle	Forb	Perennial
CRE	Crepis spp.	Hawksbeard	Forb	Perennial
CRFL	Cryptantha flavoculata	Roughseed cryptantha	Forb	Perennial
CRMO	Crepis modocensis	Yellowstone hawksbeard	Forb	Perennial
CROC	Crepis occidentalis	Western hawksbeard	Forb	Perennial
CYMO	Cymopterus montanus	False carrot	Forb	Perennial
DEGE	Delphinium geyeri	Plains larkspur	Forb	Perennial
DEPI	Descurainia pinnata	Pinnate tansymustard	Forb	Annual
DOPA	Dodecatheon pauciflorum	Darkthroat shootingstar	Forb	Perennial
ERAS	Erysimum asperum	Plains wallflower	Forb	Perennial
ERCA	Eriogonum caespitosum	Mat wildbuckwheat	Forb	Perennial
ERCE	Eriogonum cernuum	Nodding wildbuckwheat	Forb	Annual
ERFL	Eriogonum flavum	Yellow wildbuckwheat	Half-shrub	Perennial
ERI	Erigeron spp.	Fleagane	Forb	Perennial
ERMI	Eriogonum microthecum	Slenderbush wildbuckwheat	Forb	Perennial
EROC	Erigeron ochroleucus	Fleabane	Forb	Perennial
EROV	Eriogonum ovalifolium	Cushion wildbuckwheat	Forb	Perennial
ERPU	Erigeron pumilus	Basin fleabane	Forb	Perennial
ERSU	Eriogonum subalpinum	Subalpine wildbuckwheat	Forb	Perennial
EULA	Eurotia lanata	Winterfat	Half-shrub	Perennial
GACO	Gaura coccinea	Scarlet gaura	Forb	Perennial
GIAG	Gilia aggregata	Skyrocket gilia	Forb	Perennial
GRSP	Grayia spinosa	Spiny hopsage	Shrub	Perennial
GUSA	Gutierrezia sarothrae	Broom snakeweed	Half-shrub	Perennial
HAAC	Haplopappus acaulis	Stemless goldenweed	Forb	Perennial
JUOS	Juniperus osteosperma	Utah juniper	Tree	Perennial
JUSC	Juniperus scopulorum	Rockymountain juniper	Tree	Perennial
KOAM	Kochia americana	Greenmolly summercypress	Shrub	Perennial
KOCR	Koeleria cristata	June grass	Grass	Perennial
LARE	Lappula redowskii	Bluebur stickseed	Forb	Annual
LEDE	Lepidium densiflorum	Prairie pepperweed	Forb	Annual
LEPE	Lepidium perfoliatum	Clasping pepperweed	Forb	Annual
LEPU	Leptodactylon pungens	Granite gilia	Forb	Perennial
LERE	Lewisia rediviva	Bitterroot lewisia	Forb	Perennial
LILE	Linum lewisia	Lewis flax	Forb	Perennial
LOSI	Lomatium simplex	Narrowleaf lomatium	Forb	Perennial
LUPU	Lupinus pusillus	Rusty lupine	Forb	Annual
MACA	Machaeranthera canescens	Hoary aster	Forb	Perennial
MAGL	Machaeranthera glabriuscula	Alkali woodyaster	Half-shrub	Perennial
MAGR	Machaeranthera grindelioides	Serrate woodyaster	Half-shrub	Perennial
MATA	Machaeranthera tanacetifolia	Tansyleaf aster	Forb	Annual
MELO	Mertensia longiflora	Small bluebells	Forb	Perennial
OPPO	Opuntia polyacantha	Plains pricklypear	Forb	Perennial
ORFA	Orobanche fasciculata	Tufted broomrape	Parasite	
ORHY	Oryzopsis hymenoides	Indian ricegrass	Grass	Perennial

TABLE II. Continued

Code	Genus-Species	Common Name	Life Form	Longevity
PECL	Penstemon cleburnei	Cleyburn penstemon	Forb	Perennial
PELA	Penstemon laricifolius	Larchleaf penstemon	Forb	Perennial
PEN	Penstemon spp.		Forb	Perennial
PHHO	Phlox hoodii	Hoods phlox	Forb	Perennial
PHLO	Phlox longifolia	Long-leaf phlox	Forb	Perennial
PLPA	Plantago patagonica	Wooly plantain	Forb	Annual
PLSP	Plantago spinescens	Spiny indianwheat	Forb	Annual
POFE	Poa fendleriana	Mutton bluegrass	Grass	Perennial
POSE	Poa secunda	Sandburg bluegrass	Grass	Perennial
PSTE	Psoralea tenuiflora	Slimflower scurfpea	Forb	Perennial
SAKA	Salsola kali	Russian thistle	Forb	Annual
SECA	Senecio canus	Wooly groundsel	Forb	Perennial
SELA	Sedum lanceolatum	Stone crop	Forb	Perennial
SIHY	Sitanion hystrix	Bottlebrush squirreltail	Grass	Perennial
SILI	Sisymbrium linifolium	Flaxleaf plains-mustard	Forb	Perennial
SPCO	Sphaeralcea coccinea	Scarlet globemallow	Forb	Perennial
STCO	Stipa comata	Needleandthread	Grass	Perennial
STVI	Stipa viridula	Green needlegrass	Grass	Perennial
SYOC	Symphoricarpos occidentalis	Western snowberry	Shrub	Perennial
TAOF	Taraxacum officinale	Common dandelion	Forb	Perennial
TECA	Tetradymia canescens	Gray horsebrush	Shrub	Perennial
TENU	Tetradymia nuttallii	Nuttall horsebrush	Shrub	Perennial
TESP	Tetradymia spinosa	Spiny horsebrush	Shrub	Perennial
TOIN	Townsendia incana	Hoary townsendia	Forb	Perennial
TRGY	Trifolium gymnocarpon	Hollyleaf clover	Forb	Perennial
TRI	Trifolium spp.	Clover	Forb	
UMB	Umbeliferae fam.	Carrot fam.	Forb	
IAM	Vicia americana	American vetch	Forb	Perennial
VINU	Viola nuttallii	Nuttall violet	Forb	Perennial
VIO	Violaceae fam.	Violet fam.	Forb	Perennial
VIVA	Viola vallicola	Violet	Forb	Perennial
VUOC	Vulpia octoflora	Common sixweeksgrass	Grass	Annual
YUGI	Yucca glauca	Spanish bayonett	Forb	Perennial
ZYPA	Zygadenus paniculatus	Foothill deathcamus	Forb	Perennial
ZYVE	Zygadenus venenosus	Meadow deathcamus	Forb	Perennial

TABLE III. All species phenological survey by date for each exclosure.

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Bud Kimball Exclosure		13
Cedar Mountain	"	14 & 15
Cumberland #3	"	16 & 17
Demer	"	18
Farson	"	19 & 20
Horse Creek	"	21 - 24
Mesa Antelope	"	25 & 26
Owl Draw	"	27 & 28
Red Wash #2	"	29 & 30
Shoshoni Ant #7	"	31
Sweetwater	"	32 & 33
Upper Gov't Draw	"	34 & 35

TABLE III.

PHENOLOGICAL INVENTORY Study Area Bud Kimball 1976 Type-site ARTR-AGSM

SPECIES IDENTIFICATION	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR
	2 Jun		12 Jul		28 Jul		18 Aug		31 Oct													
1. AGSM	3.3	--	4.2	5.2	14.5	13.8	14.6	15.6	14.9	15.9												
2. ARTR	2.5	--	3.0	5.2	3.4	5.3	3.7	6.4	14.0	13.9												
3. BRCO	--	--	4.7	10.5	14.3	15.0	--	--	16.2	15.9												
4. BRTE	4.9	6.5	14.1	10.7	14.3	15.3	14.9	15.9	17.0	17.0												
5. CAS	3.8	7.0	14.5	15.5	14.9	15.9	14.9	15.9	14.9	15.9												
6. CRE	--	--	--	--	14.7	15.6	--	--	14.9	15.9												
7. DEPI	--	--	14.9	15.9	14.9	15.9	--	--	17.0	17.0												
8. ERPU	3.8	6.2	14.2	15.9	14.3	15.9	14.3	15.9	16.2	15.9												
9. KOCR	--	--	--	--	14.2	13.9	--	--	16.1	15.9												
10. LARE	4.9	7.5	14.3	15.2	--	--	--	--	17.0	17.0												
11. LERE	4.5	6.2	14.3	15.3	--	--	--	--	17.0	17.0												
12. MAGR	--	--	4.8	15.1	14.1	15.3	--	--	16.1	15.9												
13. MATA	--	--	4.2	7.3	--	--	--	--	17.0	17.0												
14. OPPO	3.8	5.7	3.8	13.5	3.9	15.1	4.7	15.9	16.1	15.9												
15. PHHO	4.2	--	14.2	15.5	14.5	15.9	14.5	15.9	16.2	6.0												
16. POSE	4.7	7.5	14.1	10.4	14.2	15.2	14.8	15.7	16.8	15.9												
17. SIHY	--	--	4.3	8.7	14.1	15.2	14.3	15.5	16.2	15.9												
18. SPCO	3.5	--	4.2	--	4.8	--	14.3	15.8	14.9	15.9												
19. STCO	4.3	5.8	4.8	9.7	4.9	15.1	--	--	16.1	15.9												
20. STVI	3.8	--	--	--	14.1	15.7	14.2	15.9	16.0	15.9												
21. TRDU	3.8	5.2	15.8	15.8	14.9	15.9	14.9	15.9	17.0	17.0												
22. VIAM	--	--	14.2	--	14.5	--	14.8	--	17.0	17.0												

TABLE III. (continued)

PHENOLOGICAL INVENTORY Study Area Cedar Mt. 1976 Type-site ARTR-AGSP

SPECIES IDENTIFICATION	4 Jun		15 Jul		5 Aug		18 Aug		6 Nov													
	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR
1. AGCR	3.8	6.0	14.0	15.0	14.1	15.3	14.3	15.9	17.0	17.0												
2. AGSP	3.8	5.0	14.2	11.4	14.2	13.7	14.7	15.4	17.0	17.0												
3. ARHO	--	--	14.1	15.5	--	--	14.8	15.9	17.0	17.0												
4. ARHO[2]	14.0	9.5	--	--	--	--	14.9	15.9	17.0	17.0												
5. ARSP	3.8	6.0	14.0	12.5	14.1	15.3	14.5	15.3	14.9	15.9												
6. ARTR	2.6	--	3.2	5.3	3.5	5.6	4.3	11.0	14.6	15.8												
7. ASPU	4.5	11.0	14.0	15.6	14.3	15.9	14.9	15.9	17.0	17.0												
8. ATCO	3.0	--	3.9	--	3.9	--	4.8	--	14.9	--												
9. ATGA	4.0	10.0	4.5	15.2	4.5	15.3	14.2	15.3	14.4	15.9												
10. CHVI	3.5	--	3.9	6.0	3.9	15.2	3.9	9.2	14.9	15.9												
11. CRMO	3.5	7.0	--	--	14.1	15.5	14.9	15.9	17.0	17.0												
12. ERI	4.0	7.0	4.9	14.3	4.9	14.2	14.9	15.9	17.0	17.0												
13. EROV	--	--	4.6	15.2	--	--	14.8	15.5	14.8	15.9												
14. ERPU	4.0	7.0	4.9	15.1	--	--	--	--	17.0	17.0												
15. EULA	--	--	3.8	--	3.9	--	3.9	--	14.9	--												
16. HAAC	4.0	7.6	14.3	15.9	14.4	15.9	14.5	15.9	17.0	17.0												
17. KOAM	3.5	--	3.8	--	3.9	--	14.0	--	17.0	17.0												
18. OPPO	4.0	5.9	4.8	15.2	4.9	15.3	14.1	15.9	14.7	15.9												
19. ORHY	3.2	--	14.1	15.2	14.2	15.4	14.5	15.5	17.0	17.0												
20. PEFR	4.0	5.8	--	--	4.7	15.9	14.0	15.9	17.0	17.0												
21. PHHO	4.8	8.5	14.5	15.9	14.5	15.9	14.7	15.9	17.0	17.0												
22. PHLO	4.0	7.8	14.4	15.5	14.5	15.9	14.7	15.9	17.0	17.0												

TABLE III (continued)

PHENOLOGICAL INVENTORY Study Area Cedar Mt. 1976 Type-site AGSP-ARTR

SPECIES IDENTIFICATION	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR
	4 Jun		15 Jul		5 Aug		18 Aug		6 Nov											
1. POSE	14.1	6.5	14.5	13.8	14.7	15.2	14.5	15.4	17.0	17.0										
2. SIHY	4.1	6.0	14.0	15.0	14.2	15.3	14.6	15.7	17.0	17.0										
3. SILI	4.0	7.5	14.0	13.8	--	--	--	--	17.0	17.0										
4. SPCO	4.0	5.0	4.9	15.8	--	--	14.9	15.9	17.0	17.0										
5. TAOF	4.0	10.0	14.1	15.0	--	--	14.9	15.9	17.0	17.0										
6. TENU	4.2	--	4.8	--	4.8	--	14.7	15.4	14.9	15.9										
7. TOIN	4.0	7.2	--	--	3.9	7.2	14.2	9.4	17.0	17.0										
8.																				
9.																				
10.																				
11.																				
12.																				
13.																				
14.																				
15.																				
16.																				
17.																				
18.																				
19.																				
20.																				
21.																				
22.																				

TABLE III (continued)

PHENOLOGICAL INVENTORY Study Area Cumberland #3 1976 Type-site AGSM-AGSP-ARTR

SPECIES IDENTIFICATION	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR
	4 Jun		14 Jul		4 Aug		19 Aug		18 Sep		7 Nov											
1. ALLA	--	--	4.7	8.7	--	--	14.2	15.5	14.3	15.5	17.0	17.0										
2. AGGL	3.4	6.8	14.8	15.8	14.9	15.9	--	--	14.9	15.9	17.0	17.0										
3. AGSM	3.5	--	14.3	--	14.3	--	14.6	--	16.1	--	17.0	17.0										
4. AGSP	3.3	6.2	14.0	11.4	14.2	15.3	14.6	15.6	16.1	15.9	17.0	17.0										
5. AMAL	3.8	6.8	4.2	12.1	4.3	15.1	4.8	15.3	14.5	15.6	14.9	15.9										
6. ANDI	3.5	--	14.0	13.0	14.2	15.2	14.7	15.6	14.9	15.9	17.0	17.0										
7. ARHO[2]	4.5	10.5	14.2	15.3	14.3	15.4	14.7	15.7	16.1	15.9	17.0	17.0										
8. ARTR	2.6	--	3.1	5.2	3.6	5.8	4.2	5.4	14.0	10.0	14.5	13.8										
9. ASCI	4.9	11.9	14.2	15.3	14.3	15.6	14.5	15.7	14.9	15.9	17.0	17.0										
10. ASDI	3.5	5.0	3.8	11.5	3.9	13.6	14.5	15.2	14.6	15.3	17.0	17.0										
11. ASPU	4.2	11.7	14.6	15.6	14.7	15.7	14.8	15.8	14.9	15.9	17.0	17.0										
12. ARCO	3.5	--	14.0	13.0	14.2	15.2	14.7	15.6	14.9	15.9	17.0	17.0										
13. CANU	--	--	4.3	8.5	14.1	15.1	14.8	15.8	14.9	15.9	17.0	17.0										
14. CAS	3.7	5.8	14.2	13.9	14.2	15.2	14.7	15.2	14.9	15.3	17.0	17.0										
15. CHVI	3.1	--	3.8	5.9	4.8	9.0	14.2	9.4	14.3	12.2	14.9	15.9										
16. COPA	--	--	4.7	12.8	4.7	15.1	4.7	15.1	14.2	15.9	17.0	17.0										
17. CORA	--	--	3.6	5.7	3.8	6.4	4.8	15.3	14.5	15.6	17.0	17.0										
18. CRE	4.5	5.4	14.1	15.7	14.3	15.8	14.7	15.9	14.9	15.9	17.0	17.0										
19. ERMI	3.5	--	3.9	5.8	3.9	7.6	14.2	7.8	14.5	10.1	14.9	15.4										
20. LEPE	3.8	7.4	14.1	15.7	14.5	15.8	14.8	15.9	14.9	15.9	17.0	17.0										
21. LOSI	4.5	7.5	14.8	15.7	14.9	15.9	14.9	15.9	17.0	17.0	17.0	17.0										
22. MELO	4.0	6.2	14.2	13.9	14.6	15.3	14.8	15.7	14.9	15.8	17.0	17.0										

TABLE III. (continued)

PHENOLOGICAL INVENTORY Study Area Cumberland #3 1976 Type-site AGSM-AGSP-ARTR

SPECIES IDENTIFICATION	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR
	4 Jun		14 Jul		4 Aug		19 Aug		18 Sep		7 Nov											
1. OPPO	3.2	--	3.8	--	3.8	--	3.9	--	4.6	15.5	14.4	15.9										
2. ORHY	--	--	4.8	12.2	14.1	15.1	14.3	15.3	16.3	15.9	17.0	17.0										
3. PELA	--	--	--	--	14.1	15.3	14.8	15.8	16.1	15.9	17.0	17.0										
4. PHHO	4.8	9.4	14.3	15.8	14.4	15.8	14.7	15.8	14.7	15.9	14.9	15.9										
5. PHLO	2.8	7.3	14.2	15.8	14.4	15.8	14.8	15.8	14.9	15.9	17.0	17.0										
6. POFE	4.7	6.2	14.0	13.8	14.1	15.1	14.4	15.5	16.3	15.6	17.0	17.0										
7. POSE	4.0	6.4	14.6	15.5	14.7	15.6	14.8	15.5	14.9	15.9	17.0	17.0										
8. SIHY	--	--	14.1	13.6	14.3	15.2	14.3	15.4	14.9	15.9	17.0	17.0										
9. SILI	3.8	7.0	4.8	13.7	--	--	14.1	13.5	14.4	15.9	17.0	17.0										
10. STCO	--	--	14.1	15.6	14.2	15.7	14.8	15.8	16.1	15.9	17.0	17.0										
11. SYOC	3.5	--	3.8	--	3.8	--	14.6	--	14.7	--	14.9	--										
12. TECA	3.0	--	3.7	6.3	4.2	10.5	4.4	10.9	4.8	15.1	14.9	15.9										
13. TRDU	--	--	14.1	15.1	14.1	15.4	14.5	15.8	14.6	15.9	17.0	17.0										
14. TRI	3.2	--	14.1	--	14.5	--	14.6	--	14.9	--	17.0	17.0										
15. UMB	4.5	11.5	14.8	15.8	14.8	15.8	14.8	15.8	14.9	15.9	17.0	17.0										
16. ZYPA	4.5	7.5	14.7	15.2	14.7	15.5	14.8	15.8	14.9	15.9	17.0	17.0										
17.																						
18.																						
19.																						
20.																						
21.																						
22.																						

TABLE III. (continued)

PHENOLOGICAL INVENTORY Study Area Demer 1976 Type-site ARTR-AGSM

SPECIES IDENTIFICATION	VEG 30 Apr	REPR	VEG 2 Jun	REPR	VEG 6 Jul	REPR	VEG 28 Jul	REPR	VEG 18 Aug	REPR	VEG 31 Oct	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR
1. AGSM	3.5	--	4.3	--	4.4	--	14.5	--	14.9	15.7	17.0	17.0										
2. AGSP	3.7	--	4.5	6.3	4.5	13.4	14.4	15.6	14.4	15.7	14.9	15.9										
3. ARTR	1.0	--	2.4	--	3.3	5.1	3.4	5.3	3.7	6.3	14.5	15.0										
4. BOGR	3.0	--	4.1	--	4.2	7.1	4.6	10.0	14.1	12.1	14.9	15.9										
5. BRTE	4.0	--	4.5	6.0	14.3	15.1	14.4	15.3	14.9	15.6	17.0	17.0										
6. CIR	17.0	17.0	3.1	--	--	--	--	--	3.6	--	14.9	--										
7. DEGE	3.0	--	3.8	6.2	14.5	15.5	14.9	15.9	14.9	15.9	17.0	17.0										
8. DEPI	17.0	17.0	3.3	9.0	--	--	--	--	14.9	15.9	17.0	17.0										
9. LARE	17.0	17.0	3.5	11.0	4.1	12.5	--	--	14.9	15.9	17.0	17.0										
10. LEDE	17.0	17.0	--	--	14.1	15.1	14.6	15.6	--	--	14.9	15.9										
11. OPPO	2.0	--	3.0	5.3	3.5	15.5	3.7	15.6	4.2	15.2	16.1	15.9										
12. ORHY	3.7	--	--	--	--	--	--	--	14.5	15.5	16.0	15.9										
13. PLSP	17.0	17.0	3.5	5.2	--	--	14.1	13.2	--	--	17.0	17.0										
14. POSE	4.0	--	4.5	7.2	14.1	11.2	14.4	13.2	14.9	15.4	16.7	17.0										
15. SAKA	17.0	17.0	--	--	3.2	--	3.3	--	3.5	--	14.9	15.9										
16. SIHY	3.8	--	4.5	6.7	14.1	15.3	14.5	15.6	14.7	15.9	16.7	17.0										
17. SILI	17.0	17.0	4.5	7.8	4.7	8.9	3.9	12.6	3.8	10.1	14.9	15.9										
18. SPCO	17.0	17.0	3.2	--	--	--	--	--	--	--	14.9	15.9										
19. STCO	3.7	--	4.5	6.3	14.1	15.2	14.2	15.6	14.3	15.8	16.1	15.9										
20. VUOC	17.0	17.0	3.5	6.7	14.1	15.1	14.5	15.5	14.9	15.9	17.0	17.0										
21.																						
22.																						

TABLE III. (continued)

PHENOLOGICAL INVENTORY Study Area Farson 1976 Type-site ARTR-AGSM

SPECIES IDENTIFICATION	1 May		25 May		1 Jul		2 Aug		18 Aug		18 Sep		6 Nov									
	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR
1. AGSM	2.6	--	3.7	--	4.2	6.3	14.5	15.3	14.4	15.6	16.4	15.8	17.0	17.0								
2. ALTE	3.0	--	14.1	9.1	14.2	13.8	14.4	15.4	14.8	15.8	17.0	17.0	17.0	17.0								
3. ARHO	3.0	--	3.8	6.5	4.9	13.9	14.2	15.3	14.7	15.8	14.8	15.9	17.0	17.0								
4. ARHO[2]	2.0	--	3.5	5.1	3.6	6.1	14.7	15.6	14.8	15.8	14.8	15.9	17.0	17.0								
5. ARTR	14.9	15.9	2.0	--	3.5	5.1	3.5	5.2	3.8	5.7	4.5	10.0	14.2	15.4								
6. ASPU	2.3	--	3.7	7.5	3.8	10.5	14.1	15.3	--	--	14.9	15.9	17.0	17.0								
7. ATCO	2.0	--	4.1	5.5	--	--	4.7	--	4.8	--	14.1	--	14.9	17.0								
8. CAEL	3.0	--	4.5	10.0	4.8	9.8	14.1	15.1	14.2	15.2	14.3	15.4	17.0	17.0								
9. CHVI	1.3	--	3.3	--	3.5	6.2	3.9	8.9	4.4	10.8	14.3	15.2	17.0	17.0								
10. CYMO	2.3	--	4.1	--	14.4	--	14.9	--	14.9	--	14.9	15.9	17.0	17.0								
11. ERCE	--	--	2.0	--	3.5	5.8	4.1	10.1	14.3	12.0	14.9	15.9	17.0	17.0								
12. EROV	--	--	3.0	--	14.1	7.2	14.0	15.2	14.2	15.7	14.3	15.8	17.0	17.0								
13. EULA	--	--	2.0	--	3.1	--	3.8	--	14.1	--	14.1	--	14.9	17.0								
14. GRSP	1.5	--	3.4	--	3.6	5.0	3.9	10.2	14.0	13.8	14.4	15.6	17.0	17.0								
15. GUSA	1.4	--	3.4	--	3.8	5.9	4.3	13.9	14.7	15.4	14.9	15.9	17.0	17.0								
16. KOCR	2.0	--	--	--	4.5	10.8	14.1	15.1	14.2	15.4	14.8	15.8	17.0	17.0								
17. HAAC	2.0	--	3.5	5.6	3.7	--	--	--	4.9	15.0	14.7	15.9	17.0	17.0								
18. OPPO	2.0	--	2.0	--	3.0	8.0	3.7	13.4	3.9	15.0	14.1	15.9	17.0	17.0								
19. ORHY	2.6	--	3.8	--	4.2	6.2	14.0	15.4	14.3	15.8	14.5	15.8	17.0	17.0								
20. PECL	--	--	3.5	7.5	4.2	15.4	4.9	15.4	14.1	15.8	14.9	15.9	17.0	17.0								
21. PHHO	2.5	6.1	3.5	7.3	4.0	11.0	4.1	15.2	14.7	15.5	14.8	15.9	17.0	17.0								
22. POSE	3.5	--	--	--	4.5	10.8	14.4	15.3	14.8	15.8	14.8	15.8	17.0	17.0								

TABLE III. (continued)

PHENOLOGICAL INVENTORY Study Area Farson 1976 Type-site ARTR-AGSM

SPECIES IDENTIFICATION	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR
	1 May		25 May		1 Jul		2 Aug		18 Aug		18 Sep		6 Nov									
1. SIHY	2.6	--	4.2	--	4.3	7.0	14.1	13.3	14.4	15.5	14.5	15.6	17.0	17.0								
2. SILI	3.5	7.2	4.3	13.9	--	--	--	--	14.8	15.8	14.9	15.9	17.0	17.0								
3. SPCO	--	--	3.2	--	3.9	10.5	4.3	15.4	14.1	15.4	14.9	15.9	17.0	17.0								
4. STCO	2.6	--	3.8	--	4.2	6.2	14.3	15.7	14.3	15.7	14.6	15.9	17.0	17.0								
5.																						
6.																						
7.																						
8.																						
9.																						
10.																						
11.																						
12.																						
13.																						
14.																						
15.																						
16.																						
17.																						
18.																						
19.																						
20.																						
21.																						
22.																						

TABLE III. (continued)

PHENOLOGICAL INVENTORY Study Area Horse Creek 1976 Type-site ARNO-AGSP

SPECIES IDENTIFICATION	VEG 30 Apr	REPR	VEG 2 Jun	REPR	VEG 1 Jul	REPR	VEG 29 Jul	REPR	VEG 18 Aug	REPR	VEG 19 Sep	REPR	VEG 31 Oct	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR
1. AGGL	17.0	17.0	14.0	6.8	--	--	14.5	15.6	14.9	15.9	17.0	17.0	17.0	17.0								
2. AGSP	3.6	--	4.3	6.2	4.5	10.5	14.5	15.6	14.5	15.9	14.7	15.9	17.0	17.0								
3. ARFE	17.0	17.0	4.8	--	--	--	14.1	15.3	14.6	15.7	14.9	15.9	17.0	17.0								
4. ARNO	14.8	15.9	2.3	--	2.9	5.3	3.5	5.5	3.7	6.6	4.7	8.4	14.4	10.0								
5. ARTR	14.8	15.9	2.6	--	3.0	5.3	3.5	5.7	3.8	7.2	4.7	8.4	14.1	10.2								
6. BRTE	17.0	17.0	14.1	10.5	14.6	12.1	14.7	15.9	14.9	15.9	14.9	15.9	17.0	17.0								
7. CAAN	3.0	--	4.6	6.7	14.0	12.5	14.6	15.5	--	--	14.9	15.9	17.0	17.0								
8. CHDE	17.0	17.0	4.4	5.1	14.1	13.5	14.2	15.1	--	--	14.9	15.9	17.0	17.0								
9. CIR	2.0	--	4.2	5.5	--	--	14.6	15.6	14.9	15.9	17.0	17.0	17.0	17.0								
10. COPA	17.0	17.0	4.0	--	--	--	14.0	13.9	14.0	13.9	14.3	15.0	14.9	15.9								
11. CRBR	2.0	--	4.5	7.8	--	--	14.9	15.9	3.9	15.9	14.9	15.9	17.0	17.0								
12. CRFL	2.0	--	4.7	7.4	4.9	13.9	14.1	15.3	14.7	15.8	14.9	15.9	17.0	17.0								
13. DEPI	17.0	17.0	4.2	6.4	14.5	15.2	14.6	15.3	14.9	15.9	14.9	15.9	17.0	17.0								
14. EULA	17.0	17.0	4.2	5.0	4.3	5.3	4.7	--	4.9	--	14.1	8.6	14.5	12.7								
15. GACO	1.5	--	3.5	5.0	4.3	13.4	14.2	15.6	14.0	15.3	14.9	15.9	17.0	17.0								
16. GUSA	17.0	17.0	3.5	--	3.5	--	14.0	6.3	14.1	6.7	14.0	8.4	14.5	12.4								
17. HAAC	2.0	--	4.5	8.2	14.1	13.0	14.3	15.9	14.9	15.9	14.9	15.9	17.0	17.0								
18. LARE	17.0	17.0	4.5	6.5	14.1	15.2	14.6	15.7	14.9	15.9	14.9	15.9	17.0	17.0								
19. OPPO	2.0	--	2.7	6.5	3.8	9.5	3.8	12.1	3.9	15.8	14.2	15.8	14.7	17.0								
20. ORHY	17.0	17.0	--	--	4.8	12.8	14.1	15.3	14.2	15.5	14.9	15.9	17.0	17.0								
21. PECL	3.0	--	4.5	7.1	3.8	15.8	14.1	15.6	14.3	15.8	14.9	15.9	17.0	17.0								
22. PHHO	2.8	6.1	4.7	15.1	4.8	15.7	14.3	15.9	14.4	15.9	14.9	15.9	17.0	17.0								

TABLE III. (continued)

PHENOLOGICAL INVENTORY Study Area Horse Creek 1976 Type-site ARNO-AGSP

SPECIES IDENTIFICATION	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR
	30 Apr		2 Jun		1 Jul		29 Jul		18 Aug		19 Sep		31 Oct									
1. POSE	17.0	17.0	4.8	6.0	14.3	15.5	14.4	15.6	14.7	15.7	14.9	15.9	17.0	17.0								
2. SAKA	17.0	17.0	--	--	3.1	--	3.6	5.9	3.8	6.7	14.8	13.9	17.0	17.0								
3. SIHY	17.0	17.0	4.2	6.4	4.9	13.9	14.2	15.6	14.5	15.6	14.9	15.9	17.0	17.0								
4. SPCO	17.0	17.0	3.8	6.2	3.9	15.3	14.0	15.6	14.3	15.9	16.2	15.9	17.0	17.0								
5. STCO	17.0	17.0	4.2	5.5	4.5	12.0	14.1	15.3	14.6	15.7	14.9	15.9	17.0	17.0								
6. VIVA	2.5	--	3.5	6.4	4.8	15.1	14.6	15.9	--	--	14.9	15.9	17.0	17.0								
7. YUGL	1.5	--	3.0	--	3.6	--	4.3	--	4.9	--	14.1	--	14.9	--								
8. ZYVE	2.0	--	4.8	10.5	14.9	15.9	--	--	14.9	15.9	14.9	15.9	17.0	17.0								
9.																						
10.																						
11.																						
12.																						
13.																						
14.																						
15.																						
16.																						
17.																						
18.																						
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20.																						
21.																						
22.																						

TABLE III. (continued)

PHENOLOGICAL INVENTORY Study Area Horse Creek 1976 Type-site ARTR-AGSM

SPECIES IDENTIFICATION	30 Apr		2 Jun		1 Jul		29 Jul		18 Aug		19 Sep		31 Oct									
	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR
1. AGSM	3.3	--	3.8	--	3.8	--	14.3	15.1	14.6	15.9	14.7	15.9	17.0	17.0								
2. AGSP	3.6	--	4.0	6.2	4.3	10.5	14.5	15.6	14.7	15.9	14.5	15.9	17.0	17.0								
3. ALTE	2.0	--	14.1	13.1	14.3	15.2	14.4	15.8	14.9	15.9	--	--	17.0	17.0								
4. ARTR	14.8	15.9	2.6	--	3.0	5.3	3.8	5.7	3.8	6.3	4.7	7.4	14.1	10.2								
5. BRTE	17.0	17.0	14.5	9.2	14.6	12.1	14.7	15.1	14.9	15.9	14.9	15.9	17.0	17.0								
6. CAAN	3.0	--	4.5	6.8	14.0	12.5	14.6	15.5	--	--	14.9	15.9	17.0	17.0								
7. CANU	17.0	17.0	--	--	14.3	13.5	14.4	15.2	14.9	15.9	17.0	17.0	17.0	17.0								
8. CHDE	17.0	17.0	3.5	--	14.1	13.5	14.2	15.1	--	--	4.9	11.5	17.0	17.0								
9. COPA	--	--	4.0	--	--	--	14.0	13.9	14.0	15.0	14.3	15.6	14.9	15.9								
10. CROC	2.5	--	3.5	6.5	14.1	15.3	14.6	15.9	14.9	15.9	14.9	15.9	17.0	17.0								
11. DEPI	17.0	17.0	4.8	7.5	14.5	15.2	14.6	15.3	14.9	15.9	14.9	15.9	17.0	17.0								
12. ERPU	17.0	17.0	4.2	8.5	4.4	11.2	14.1	15.6	--	--	4.8	8.7	14.9	15.9								
13. EULA	17.0	17.0	4.2	--	4.3	--	4.7	--	4.9	--	14.1	8.6	14.2	12.2								
14. GUSA	17.0	17.0	3.0	--	3.5	--	14.0	6.1	14.1	6.7	14.1	8.4	14.4	11.5								
15. HAAC	17.0	17.0	--	--	14.1	15.0	14.2	15.9	14.9	15.9	--	--	17.0	17.0								
16. LARE	17.0	17.0	4.8	8.2	14.1	15.2	14.6	15.7	14.9	15.9	14.9	15.9	17.0	17.0								
17. LEDE	17.0	17.0	4.8	7.5	14.1	15.1	14.5	15.5	14.9	15.9	14.9	15.9	17.0	17.0								
18. MACA	17.0	17.0	4.0	6.2	4.2	7.1	14.0	13.2	14.2	15.3	14.9	15.9	17.0	17.0								
19. MAGR	17.0	17.0	--	--	--	--	4.7	15.3	4.8	15.2	14.2	15.9	17.0	17.0								
20. OPPO	2.0	--	4.5	6.2	4.6	9.5	4.8	12.2	4.8	15.8	4.9	15.8	14.2	15.9								
21. ORHY	17.0	17.0	--	--	4.8	12.8	14.1	15.2	14.2	15.5	14.9	15.9	17.0	17.0								
22. PECL	3.0	--	4.4	7.2	4.8	15.8	14.1	15.6	14.5	15.9	14.9	15.9	14.9	15.9								

TABLE III. (continued)

PHENOLOGICAL INVENTORY Study Area Horse Creek 1976 Type-site ARTR-AGSM

SPECIES IDENTIFICATION	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR
	30 Apr		2 Jun		1 Jul		29 Jul		18 Aug		19 Sep		31 Oct									
1. PHHO	2.8	6.1	4.4	9.2	4.5	15.5	14.3	15.9	14.4	15.9	14.9	15.9	17.0	17.0								
2. POSE	17.0	17.0	14.1	7.2	14.3	15.5	14.4	15.6	14.7	15.7	14.9	15.9	17.0	17.0								
3. SIHY	17.0	17.0	4.0	6.2	4.9	13.9	14.2	15.6	14.5	15.7	14.9	15.9	17.0	17.0								
4. SPCO	17.0	17.0	3.5	6.5	3.9	15.3	14.0	15.6	14.3	15.9	16.2	15.4	17.0	17.0								
5. STCO	17.0	17.0	4.2	5.5	4.5	12.0	14.1	15.3	14.6	15.6	14.9	15.9	17.0	17.0								
6. TRDU	3.0	--	14.1	--	14.3	15.5	14.6	15.9	14.9	15.9	14.9	15.9	17.0	17.0								
7. VINU	3.0	--	3.5	--	14.0	15.2	14.6	15.9	14.7	15.9	14.9	15.9	17.0	17.0								
8.																						
9.																						
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16.																						
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18.																						
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20.																						
21.																						
22.																						

TABLE III. (continued)

PHENOLOGICAL INVENTORY Study Area Mesa Antelope 1976 Type-site ARTR-AGSM

SPECIES IDENTIFICATION	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR
	4 Jun		13 Jul		2 Aug		18 Sep		7 Nov													
1. AGSM	3.3	--	14.1	--	14.4	--	16.4	--	17.0	17.0												
2. ALTE	3.0	7.4	4.9	15.2	14.9	15.9	14.9	15.9	17.0	17.0												
3. ARHO[2]	--	--	4.8	15.5	14.1	15.6	14.9	15.9	17.0	17.0												
4. ARTR	2.6	--	3.2	5.2	3.9	5.7	4.9	10.5	14.5	15.5												
5. ASSP	--	--	4.1	--	4.9	13.2	14.2	15.0	14.9	17.0												
6. ATGA	--	--	3.1	--	4.0	10.2	4.8	13.9	14.9	15.9												
7. CAEL	3.4	5.2	3.9	13.1	14.2	15.4	14.4	15.9	14.9	17.0												
8. CHVI	2.8	--	3.8	5.5	3.9	8.0	14.2	12.0	14.7	15.9												
9. CORA	--	--	3.1	--	3.7	7.5	14.5	11.5	17.0	17.0												
10. ERCA[2]	3.6	7.5	--	--	3.9	13.2	--	--	14.4	15.2												
11. ERCE	2.5	--	3.8	6.5	4.0	10.5	14.2	15.1	14.8	15.9												
12. EROV	--	--	3.8	9.7	4.9	13.2	14.2	13.8	14.8	15.8												
13. ERPU	3.8	7.2	14.0	12.0	--	--	16.2	15.9	17.0	17.0												
14. EULA	3.2	--	3.8	6.2	3.9	6.8	4.6	12.5	14.2	15.9												
15. HAAC	3.2	7.4	4.9	15.6	14.1	15.7	14.8	15.9	17.0	17.0												
16. LEPU	--	--	4.4	15.1	4.9	15.9	--	--	17.0	17.0												
17. MACA	--	--	--	--	3.8	7.5	14.1	15.9	17.0	17.0												
18. MATA	3.5	5.1	--	--	--	--	4.9	9.8	17.0	17.0												
19. OPPO	3.4	5.3	3.8	--	3.9	13.9	14.2	15.2	14.9	15.9												
20. ORHY	3.4	--	4.5	11.6	14.0	13.8	16.2	15.9	17.0	17.0												
21. PELA	--	--	3.9	6.1	4.7	13.8	14.1	15.9	17.0	17.0												
22. PHHO	4.0	8.4	4.4	15.5	14.1	15.6	14.6	15.9	14.9	15.9												

TABLE III. (continued)

PHENOLOGICAL INVENTORY Study Area Mesa Antelope 1976 Type-site ARTR-AGSM

SPECIES IDENTIFICATION	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR
	4 Jun		13 Jul		2 Aug		18 Sep		7 Nov													
1. POSE	3.8	5.8	14.2	13.6	14.3	15.2	14.6	15.6	17.0	17.0												
2. SIHY	3.5	--	14.0	11.8	14.2	15.3	16.0	15.9	17.0	17.0												
3. SILI	3.0	7.2	4.3	11.3	--	--	14.7	15.7	17.0	17.0												
4. STCO	--	--	4.3	11.5	14.1	15.7	16.0	15.9	17.0	17.0												
5. TRI	4.0	--	14.1	--	14.3	--	14.9	--	17.0	17.0												
6.																						
7.																						
8.																						
9.																						
10.																						
11.																						
12.																						
13.																						
14.																						
15.																						
16.																						
17.																						
18.																						
19.																						
20.																						
21.																						
22.																						

TABLE III. (continued)

PHENOLOGICAL INVENTORY Study Area Owl Draw 1976 Type-site ARNO-ARTR-AGSM-AGSP

SPECIES IDENTIFICATION	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR
	28 May		12 Jul		26 Jul		21 Aug		28 Oct													
1. AGSM	3.7	--	4.0	6.0	14.2	13.2	14.2	15.2	17.0	17.0												
2. AGSP	4.1	--	4.6	--	14.2	15.4	14.3	15.5	17.0	17.0												
3. ALTE	--	--	3.5	6.0	3.6	6.2	14.2	15.2	17.0	17.0												
4. ARHO	--	--	4.8	8.7	14.0	13.9	14.2	15.9	17.0	17.0												
5. ARHO$_2$	3.3	6.0	3.8	13.2	--	--	14.9	15.9	17.0	17.0												
6. ARNO	2.2	--	2.4	5.4	3.1	5.4	3.6	6.2	14.9	13.8												
7. ARTR	3.1	--	3.6	5.2	3.7	5.2	3.8	6.1	14.9	15.0												
8. ASDR	--	--	4.5	8.0	4.9	13.9	14.2	15.3	17.0	17.0												
9. ASMI$_2$	3.5	--	14.0	--	14.2	15.1	14.1	15.7	17.0	17.0												
10. ASPU	3.5	7.0	14.8	15.5	14.9	15.6	14.9	15.8	17.0	17.0												
11. AST	4.0	8.0	--	--	14.0	13.1	14.9	15.9	17.0	17.0												
12. BASA	3.1	--	14.0	15.6	14.2	15.9	14.4	15.9	17.0	17.0												
13. CACH	3.5	7.0	4.5	11.2	14.7	15.6	14.8	15.7	17.0	17.0												
14. CANU	3.4	--	14.0	11.3	14.1	11.7	14.5	15.6	17.0	17.0												
15. CHVI	3.3	--	3.7	6.1	3.8	6.5	14.1	8.5	14.9	15.9												
16. CRAC	3.2	5.3	14.1	15.3	14.5	15.9	14.7	15.7	17.0	17.0												
17. CYMO	3.3	6.3	14.5	15.3	14.7	15.6	14.9	15.9	17.0	17.0												
18. DOPU	3.7	9.5	--	--	--	--	14.9	15.9	17.0	17.0												
19. EROC	3.5	8.5	4.8	13.2	4.9	15.6	14.2	15.9	17.0	17.0												
20. EULA	3.5	6.1	3.8	--	3.9	6.8	4.7	13.8	14.9	15.9												
21. HAAC	3.0	--	4.6	15.5	4.9	15.6	14.1	15.8	17.0	17.0												
22. JUOS	3.1	--	3.7	--	3.8	11.5	4.4	12.5	14.9	15.1												

TABLE III. (continued)

PHENOLOGICAL INVENTORY Study Area Owl Draw 1976 Type-site ARNO-ARTR-AGSM-AGSP

SPECIES IDENTIFICATION	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR
	28 May		12 Jul		26 Jul		21 Aug		28 Oct													
1. JUSC	3.1	--	3.7	--	3.8	11.5	4.4	12.5	14.9	15.1												
2. KOCR	--	--	14.2	15.3	14.2	15.4	14.2	15.4	17.0	17.0												
3. LERE	--	--	14.1	15.5	--	--	--	--	17.0	17.0												
4. LILE	--	--	4.7	11.3	14.0	15.2	14.0	15.8	17.0	17.0												
5. MAGR	--	--	4.8	13.2	4.9	13.6	14.1	15.9	17.0	17.0												
6. OPPO	3.0	--	3.2	--	3.4	11.2	4.7	15.9	14.9	15.9												
7. ORHY	3.1	--	--	--	14.1	11.8	14.6	15.9	17.0	17.0												
8. PECL	3.5	5.5	3.7	11.7	4.8	13.8	14.2	15.7	17.0	17.0												
9. POFE	3.2	7.0	14.2	13.8	14.3	13.9	14.7	15.9	17.0	17.0												
10. PHHO	3.2	7.1	14.3	15.5	14.4	15.9	14.6	15.9	17.0	17.0												
11. POSE	4.5	6.6	14.2	15.4	14.3	15.5	14.4	15.6	17.0	17.0												
12. SECA	3.7	7.0	14.4	15.6	14.5	15.7	14.7	15.8	17.0	17.0												
13. SELA	3.5	5.4	14.1	11.8	14.1	13.6	14.1	15.1	17.0	17.0												
14. SPCO	--	--	--	--	3.5	6.5	4.8	13.9	17.0	17.0												
15. STCO	--	--	3.8	13.2	14.1	15.4	14.4	15.9	17.0	17.0												
16. TRDU	--	--	3.5	7.1	14.0	15.5	14.3	15.9	17.0	17.0												
17. TRGY	4.5	8.0	14.2	--	14.4	--	14.9	15.9	17.0	17.0												
18. VIAM	3.1	5.3	14.0	--	14.1	15.6	14.8	15.8	17.0	17.0												
19.																						
20.																						
21.																						
22.																						

TABLE III. (continued)

PHENOLOGICAL INVENTORY Study Area Red Wash #2 1976 Type-site AGSM-AGSP-ARTR

SPECIES IDENTIFICATION	4 Jun		15 Jul		6 Aug		18 Aug		17 Sep		6 Nov											
	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR
1. AGSM	3.5	--	14.4	--	14.4	15.5	14.5	15.8	16.0	15.9	17.0	17.0										
2. AGSP	4.1	7.5	4.9	13.4	14.0	15.3	14.0	15.3	14.1	15.7	17.0	17.0										
3. ALTE	4.2	8.0	14.8	15.8	14.9	15.9	14.9	15.9	17.0	17.0	17.0	17.0										
4. ARHO	--	--	4.1	9.0	4.9	15.4	--	--	14.2	15.9	17.0	17.0										
5. ARHO[2]	4.7	10.5	14.1	15.1	14.5	15.5	14.7	15.7	14.8	15.9	17.0	17.0										
6. ARTR	2.4	--	3.2	5.2	3.3	5.4	4.3	5.7	4.9	10.3	14.3	15.3										
7. ASDI	4.5	5.1	14.0	15.2	14.0	15.2	14.2	15.4	14.3	15.2	17.0	17.0										
8. ASKE	3.5	--	3.8	7.3	3.8	8.1	3.9	9.5	14.3	15.2	17.0	17.0										
9. ASPU	4.0	11.0	4.9	15.1	--	--	--	--	14.9	15.9	17.0	17.0										
10. CHDO	4.0	5.5	14.1	15.1	14.1	15.2	14.3	15.4	14.2	15.5	17.0	17.0										
11. CHNA	3.6	--	3.9	5.2	3.9	7.8	3.9	7.8	4.4	13.3	14.9	15.9										
12. CHVI	3.5	--	3.9	6.2	4.6	9.1	4.7	9.1	14.0	15.1	14.9	15.9										
13. CORA	--	--	3.6	6.1	3.9	13.2	--	--	--	--	14.9	17.0										
14. CRFL	3.8	7.0	4.1	9.6	14.3	13.9	14.5	15.6	16.2	15.9	17.0	17.0										
15. ERAS	14.0	8.0	14.2	15.5	14.4	15.6	14.4	15.8	14.9	15.9	17.0	17.0										
16. ERFL	4.3	7.8	14.2	15.3	--	--	--	--	--	--	17.0	17.0										
17. ERMI	3.5	--	3.9	7.5	4.7	13.5	4.7	13.5	4.9	13.8	14.9	15.9										
18. EROV	4.0	7.5	4.9	13.4	14.0	15.3	14.0	15.3	14.1	15.7	17.0	17.0										
19. EULA	--	--	3.6	--	3.7	7.5	3.7	7.5	3.9	11.2	14.9	15.9										
20. GIAG	4.7	8.0	14.8	15.8	14.9	15.9	14.9	15.9	14.9	15.9	17.0	17.0										
21. GRSP	3.2	--	3.8	--	14.2	--	14.6	--	14.8	--	14.9	--										
22. HAAC	4.8	8.2	--	--	14.1	15.7	14.5	15.9	16.1	15.9	17.0	17.0										

TABLE III. (continued)

PHENOLOGICAL INVENTORY Study Area Red Wash #2 1976 Type-site AGSM-AGSP-ARTR

SPECIES IDENTIFICATION	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR
	4 Jun		15 Jul		6 Aug		18 Aug		17 Sep		6 Nov											
1. LEPU	3.8	7.5	4.7	9.5	14.1	15.1	14.4	15.5	14.9	15.9	17.0	17.0										
2. MACA	3.3	--	3.6	5.9	3.9	8.9	14.1	8.9	14.3	13.2	17.0	17.0										
3. MAGR	4.0	--	3.6	--	--	--	4.4	7.5	14.9	15.9	17.0	17.0										
4. OPPO	4.0	--	4.7	--	14.1	13.8	14.1	15.4	14.3	15.7	14.9	17.0										
5. ORFA	--	--	14.9	15.9	14.9	15.9	14.9	15.9	17.0	17.0	17.0	17.0										
6. ORHY	3.5	--	14.1	15.3	14.2	15.5	14.2	15.5	14.9	15.9	17.0	17.0										
7. PEN	4.0	5.8	4.8	11.8	14.4	15.6	16.3	15.2	16.4	15.9	17.0	17.0										
8. PHHO	3.8	8.5	4.9	15.4	14.2	15.6	14.5	15.7	14.9	15.9	17.0	17.0										
9. POSE	--	--	14.3	13.9	14.3	15.2	14.6	15.5	14.7	15.6	17.0	17.0										
10. SIHY	--	--	4.7	13.3	--	--	14.3	15.4	14.9	15.9	17.0	17.0										
11. SILI	4.0	7.5	4.9	13.8	4.9	15.1	14.1	15.4	14.3	15.6	17.0	17.0										
12. STCO	4.0	--	14.2	15.2	14.2	15.4	14.3	15.5	16.2	15.9	17.0	17.0										
13. TECA	3.0	--	3.6	6.1	3.9	13.5	14.1	13.6	14.4	15.2	14.9	15.9										
14. TOIN	4.2	13.0	--	--	--	--	--	--	14.9	15.9	17.0	17.0										
15.																						
16.																						
17.																						
18.																						
19.																						
20.																						
21.																						
22.																						

TABLE III. (continued)

PHENOLOGICAL INVENTORY Study Area Shoshoni Ant #7 1976 Type-site ARTR-AGSM

SPECIES IDENTIFICATION	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR
	30 Apr		3 Jun		6 Jul		2 Aug		18 Aug		30 Oct											
1. AGSM	2.0	--	3.0	--	3.5	6.1	14.5	13.2	14.7	15.5	16.3	17.0										
2. ALTE	2.5	--	4.8	15.0	14.0	15.9	14.9	15.9	14.9	15.9	17.0	17.0										
3. ARTR	14.8	15.9	2.5	--	2.8	5.1	3.3	5.1	4.3	5.7	14.2	13.0										
4. BOGR	2.5	--	3.5	--	4.1	9.2	14.0	13.6	14.0	15.2	14.6	17.0										
5. BRTE	--	--	3.4	6.5	14.8	15.8	14.8	15.8	14.9	15.9	17.0	17.0										
6. DEPI	--	--	4.0	13.8	14.9	15.8	14.9	15.9	14.9	15.9	17.0	17.0										
7. ERPU	--	--	3.6	6.8	4.5	13.8	4.9	15.7	4.9	15.8	14.9	17.0										
8. LUPU	--	--	3.5	6.8	4.8	15.9	14.9	15.9	14.9	15.9	17.0	17.0										
9. OPPO	1.5	--	3.8	5.2	3.9	15.1	3.9	15.4	4.0	15.6	15.5	17.0										
10. ORHY	2.2	--	3.8	--	3.9	13.9	14.2	15.7	14.2	15.7	14.7	17.0										
11. PHHO	3.0	6.3	3.5	13.8	3.7	15.5	14.1	15.9	14.1	15.9	16.5	8.0										
12. POSE	3.0	--	3.8	7.1	3.9	13.5	14.2	15.1	14.9	15.9	16.4	17.0										
13. SIHY	--	--	--	--	3.8	13.8	14.1	15.3	14.2	15.8	16.2	17.0										
14. SPCO	1.5	--	2.8	--	3.5	--	3.9	--	3.9	--	14.8	17.0										
15. STCO	2.6	--	3.8	--	3.9	--	14.1	15.6	14.5	15.8	16.2	17.0										
16.																						
17.																						
18.																						
19.																						
20.																						
21.																						
22.																						

TABLE III. (continued)

PHENOLOGICAL INVENTORY Study Area Sweetwater 1976 Type-site ARTR-ARNO-AGSM

SPECIES IDENTIFICATION	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR
	30 Apr		2 Jun		1 Jul		1 Aug		18 Aug		19 Sep		1 Nov									
1. AGSM	3.0	--	3.3	--	3.6	--	14.4	--	14.4	--	16.1	--	17.0	17.0								
2. ARFR	1.0	--	2.5	--	2.9	--	3.1	5.6	3.5	6.4	16.1	12.5	14.9	15.9								
3. ARHO	2.5	--	4.0	8.8	4.5	9.1	14.1	15.7	14.3	15.9	14.5	15.9	17.0	17.0								
4. ARHO[2]	2.0	--	4.2	13.0	14.8	15.9	14.9	15.9	14.9	15.9	14.9	15.9	17.0	17.0								
5. ARNO	14.8	15.9	2.5	--	2.8	5.1	3.4	5.3	3.7	5.8	14.0	10.1	14.4	10.4								
6. ARTR	14.8	15.9	2.8	--	3.0	5.2	3.7	5.6	4.1	5.6	4.6	9.5	14.2	10.4								
7. ASMI	2.0	--	4.0	6.0	--	--	14.0	15.1	14.1	15.9	14.2	15.9	17.0	17.0								
8. ASPU	2.0	--	4.4	9.1	14.0	15.1	14.0	15.8	14.3	15.9	17.0	17.0	17.0	17.0								
9. ASSP	2.0	--	2.8	--	4.0	12.0	14.1	15.2	14.4	15.4	16.1	15.9	16.2	15.9								
10. CAEL	2.6	--	3.5	5.2	4.0	7.1	4.4	11.2	14.1	11.4	16.1	15.1	17.0	17.0								
11. CAFI	2.8	5.1	4.5	7.1	4.7	8.2	4.9	11.2	14.1	11.4	16.0	15.1	17.0	17.0								
12. CHNA	--	--	2.5	--	3.0	--	3.4	--	3.7	--	14.0	9.9	14.5	11.8								
13. CHVI	--	--	2.8	--	4.0	--	4.3	6.1	4.4	7.2	14.3	10.0	14.4	10.8								
14. COPA	2.0	--	4.0	7.1	3.8	12.4	4.2	13.7	4.4	15.8	14.3	15.9	14.9	15.9								
15. CRBR	2.0	--	2.9	--	3.1	6.1	4.3	13.6	14.1	15.8	16.2	15.9	17.0	17.0								
16. CRFL	--	--	4.0	8.0	4.0	9.5	4.9	13.9	4.9	15.4	16.2	15.9	17.0	17.0								
17. CYMO	2.7	6.1	4.3	15.1	14.3	15.9	14.9	15.9	14.9	15.9	14.9	15.9	17.0	17.0								
18. DEGE	2.5	--	4.0	13.0	14.5	15.1	14.9	15.8	14.9	15.9	14.9	15.9	17.0	17.0								
19. EROV	--	--	4.0	6.0	4.0	13.0	14.1	13.8	14.1	13.9	14.2	15.0	14.7	15.9								
20. KOCR	3.2	--	4.5	6.3	4.5	13.0	14.1	13.8	14,3	15.7	16.2	15.7	17.0	17.0								
21. LEPU	1.5	--	3.0	6.1	3.2	9.0	14.1	15.4	14.5	15.4	14.9	15.9	17.0	17.0								
22. MAGR	--	--	3.1	--	4.2	--	14.1	7.6	14.1	7.7	16.1	15.9	17.0	17.0								

TABLE III. (continued)

PHENOLOGICAL INVENTORY Study Area Sweetwater 1976 Type-site ARTR-ARNO-AGSM

SPECIES IDENTIFICATION	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR
	30 Apr		2 Jun		1 Jul		1 Aug		18 Aug		19 Sep		1 Nov									
1. OPPO	1.5	--	3.2	5.2	3.8	8.5	3.9	9.6	4.0	12.2	14.1	15.9	14.7	15.9								
2. ORHY	3.2	--	3.2	--	4.8	15.0	14.1	15.8	14.1	15.9	16.3	15.9	17.0	17.0								
3. PEFR	2.1	--	2.2	--	3.4	13.2	4.9	15.6	4.9	15.9	16.0	15.9	17.0	17.0								
4. PHHO	2.8	6.1	4.0	15.9	14.0	15.9	14.2	15.9	14.1	15.9	14.5	15.9	17.0	17.0								
5. PSTE	--	--	2.0	--	3.2	--	4.1	--	14.3	15.9	14.5	15.9	14.5	15.9								
6. SPCO	--	--	3.1	--	--	--	4.3	6.3	14.1	15.9	14.1	15.9	17.0	17.0								
7. STCO	3.2	--	3.0	--	4.5	10.0	14.1	15.6	14.2	15.8	16.2	15.9	17.0	17.0								
8. TECA	1.5	--	2.6	--	3.1	--	3.9	6.2	3.9	13.8	14.2	15.7	14.9	15.9								
9. TOIN	2.0	--	3.1	--	--	--	4.1	6.1	4.8	7.9	14.2	10.2	17.0	17.0								
10. ZYVE	2.3	--	14.0	13.8	14.9	15.9	14.9	15.9	14.9	15.9	14.9	15.9	17.0	17.0								
11.																						
12.																						
13.																						
14.																						
15.																						
16.																						
17.																						
18.																						
19.																						
20.																						
21.																						
22.																						

TABLE III. (continued)

PHENOLOGICAL INVENTORY Study Area Upper Gov't Draw 1976 Type-site ARTR-AGSM

SPECIES IDENTIFICATION	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR
	7 Jun		13 Jul		1 Aug		18 Aug		18 Sep		6 Nov											
1. AGSM	3.5	--	14.2	--	14.3	15.1	14.7	--	16.2	15.9	17.0	17.0										
2. ALTE	4.0	9.0	14.0	13.8	14.1	15.7	14.9	15.9	17.0	17.0	17.0	17.0										
3. ARLI	4.0	10.5	14.1	15.8	16.1	6.5	14.3	13.8	14.9	15.9	17.0	17.0										
4. ARTR	2.5	--	3.2	5.2	3.4	5.2	3.8	5.7	4.8	9.0	14.1	15.2										
5. ASPU	3.8	10.5	14.1	15.7	14.5	15.8	14.7	15.9	14.8	15.9	17.0	17.0										
6. BRTE	--	--	14.2	15.2	14.5	15.6	14.9	15.9	14.9	15.9	17.0	17.0										
7. CAS	3.8	6.0	14.2	13.5	--	--	14.7	15.9	14.9	15.9	17.0	17.0										
8. CHVI	3.4	--	4.2	5.2	4.5	7.5	4.8	7.8	14.0	8.8	14.9	15.9										
9. CRMO	4.0	8.5	14.5	15.9	14.6	15.9	14.7	15.9	14.9	15.9	17.0	17.0										
10. CYMO	14.1	15.9	14.9	15.9	14.9	15.9	14.9	15.9	17.0	17.0	17.0	17.0										
11. DEPI	--	--	14.2	13.2	14.5	15.4	16.4	15.9	14.9	15.9	17.0	17.0										
12. ERPU	--	--	4.0	9.1	4.9	15.4	4.9	15.9	14.2	15.9	17.0	17.0										
13. KOCR	4.0	6.0	4.5	12.5	4.9	13.4	14.2	15.7	14.2	15.7	16.2	17.0										
14. LARE	4.5	6.5	14.0	13.1	14.4	15.2	14.9	15.9	14.9	15.9	17.0	17.0										
15. MACA	--	--	--	--	4.5	8.5	4.7	8.8	14.1	12.5	17.0	17.0										
16. OPPO	3.8	5.3	3.9	13.7	4.0	13.9	4.0	14.0	14.1	15.9	16.1	17.0										
17. PECL	3.0	--	14.9	15.9	14.9	15.9	14.9	15.9	16.2	15.9	17.0	17.0										
18. PHHO	4.5	15.0	14.0	15.5	14.1	15.8	14.2	15.9	14.4	15.9	17.0	17.0										
19. POSE	4.8	6.5	14.0	13.2	14.1	13.8	14.7	15.7	14.9	15.9	17.0	17.0										
20. SPCO	3.4	--	4.8	15.2	4.9	15.4	4.9	15.5	14.2	15.9	17.0	17.0										
21. STCO	3.8	--	4.2	15.6	14.1	15.7	14.1	15.7	16.3	15.9	17.0	17.0										
22. TRDU	4.0	6.5	4.7	13.2	14.4	15.5	14.4	15.5	14.9	15.9	17.0	17.0										

TABLE III. (continued)

PHENOLOGICAL INVENTORY Study Area Upper Gov't Draw 1976 Type-site ARTR-AGSM

SPECIES IDENTIFICATION	7 Jun		13 Jul		1 Aug		18 Aug		18 Sep		6 Nov											
	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR	VEG	REPR
1. VIAM	4.0	--	14.1	--	14.2	--	14.2	--	14.2	--	17.0	17.0										
2. VIO	4.5	15.9	14.5	15.9	--	--	--	--	14.9	15.9	17.0	17.0										
3.																						
4.																						
5.																						
6.																						
7.																						
8.																						
9.																						
10.																						
11.																						
12.																						
13.																						
14.																						
15.																						
16.																						
17.																						
18.																						
19.																						
20.																						
21.																						
22.																						

TABLE IV. Prime species intensive phenological inventory by exclosure, plant species, and data collection date for each permanently identified plant.

		Page
Agropyron smithii		
Bud Kimball Exclosure		37 - 41
Cumberland #3	"	42 - 47
Demer	"	48 - 52
Farson	"	53 - 58
Horse Creek	"	59 - 64
Mesa Antelope	"	65 - 69
Owl Draw	"	70 - 74
Red Wash #2	"	75 - 80
Shoshone Ant #7	"	81 - 85
Sweetwater	"	86 - 91
Upper Gov't Draw	"	92 - 97
Agropyron spicatum		
Cedar Mountain Exc.		98 - 102
Cumberland #3	"	103 - 107
Demer	"	108 - 112
Horse Creek	"	113 - 118
Owl Draw	"	119 - 123
Red Wash #2	"	124 - 129
Artemisia nova		
Horse Creek Exclosure		130 - 135
Owl Draw	"	136 - 140
Sweetwater	"	141 - 146
Artemisia tridentata		
Bud Kimball Exclosure		147 - 151
Cedar Mountain	"	152 - 156
Cumberland #3	"	157 - 162
Demer	"	163 - 167
Farson	"	168 - 173
Horse Creek	"	174 - 179
Mesa Antelope	"	180 - 184
Owl Draw	"	185 - 189
Red Wash #2	"	190 - 195
Shoshone Ant #7	"	196 - 201
Sweetwater	"	202 - 207
Upper Gov't Draw	"	208 - 213

TABLE IV.

Agropyron smithii Study Area Bud Kimball Date 2 June 76

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS	
	VEG.	REPR.						
1.	3.3	---	.2	13.4	---	---	1	
2.	3.2	---	.2	17.0	---	---	2	
3.	3.1	---	.2	22.7	---	---	2	
4.	3.4	---	.2	11.5	---	---	1	
5.	4.5	---	.2	17.0	---	---	1	
6.	4.1	---	.2	19.6	---	---	2	
7.	2.9	---	.2	12.5	---	---	2	
8.	3.8	---	.3	22.0	---	---	2	
9.	3.8	---	.2	22.6	---	---	1	
10.	2.6	---	.2	9.5	---	---	1	
11.	4.0	---	.3	20.3	---	---	3	
12.	2.8	---	.1	12.6	---	---	2	
13.	3.1	---	.2	6.0	---	---	1	Eaten
14.	3.1	---	.3	21.5	---	---	2	
15.	3.3	---	.3	22.0	---	---	2	
16.	3.3	---	.1	2.5	---	---	1	Eaten
17.	4.2	---	.3	15.5	---	---	2	
18.	2.0	---	.1	6.0	---	---	1	
19.	3.2	---	.3	8.4	---	---	3	Eaten
20.	4.2	---	.3	33.5	---	---	4	

TABLE IV.

Agropyron smithii Study Area Bud Kimball Date 12 July 76

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKELETS/ CULM	NOS. OF VEG. PLANTS	
	VEG.	REPR.						
1.	3.5	---	.2	15.0	---	---	1	
2.	3.8	---	.2	19.0	---	---	2	Wind damage
3.	3.6	---	.2	25.0	---	---	2	
4.	4.0	---	.2	23.1	---	---	1	
5.	4.8	---	.2	17.0	---	---	1	
6.	4.4	---	.2	20.0	---	---	2	
7.	4.5	---	.3	19.5	---	---	2	
8.	4.4	---	.3	23.0	---	---	2	
9.	4.6	---	.2	24.5	---	---	1	
10.	4.1	---	.3	15.5	---	---	1	
11.	4.6	---	.2	23.5	---	---	3	
12.	4.3	---	.2	18.5	---	---	2	Replacement plant
13.	3.8	---	.3	17.0	---	---	1	
14.	3.9	---	.3	22.5	---	---	2	
15.	4.2	---	.3	22.3	---	---	2	
16.	4.0	---	.1	7.5	---	---	1	
17.	4.3	---	.3	16.5	---	---	2	
18.	4.2	---	.3	17.0	---	---	1	
19.	4.1	---	.3	18.2	---	---	3	
20.	4.7	---	.3	36.0	---	---	4	

TABLE IV.

Agropyron smithii Study Area Bud Kimball Date 28 July 76

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS	
	VEG.	REPR.						
1.	14.7	---	.1	13.5	---	---	1	
2.	14.8	---	.1	12.5	---	---	2	
3.	14.8	---	.1	18.5	---	---	2	
4.	14.8	---	.2	18.5	---	---	1	
5.	14.2	---	.1	17.2	---	---	1	
6.	14.2	---	.2	20.0	---	---	3	
7.	14.3	---	.1	11.5	---	---	2	
8.	14.5	---	.1	18.0	---	---	1	
9.	14.8	---	.2	21.2	---	---	2	
10.	14.7	---	.2	10.5	---	---	2	
11.	14.3	---	.2	15.5	---	---	2	
12.	14.3	---	.2	18.0	---	---	1	
13.	14.9	---	.1	9.0	---	---	1	
14.	14.5	15.8	.2	20.5	---	---	3	Head destroyed
15.	14.2	---	.2	20.5	---	---	1	
16.	14.5	---	---	---	---	---	1	Damaged plant
17.	14.2	---	.2	15.8	---	---	2	
18.	14.8	---	.2	10.5	---	---	1	
19.	14.3	---	.1	20.7	---	---	1	
20.	14.2	---	.2	34.2	---	---	4	

TABLE IV.

Agropyron smithii Study Area Bud Kimball Date 18 August 76

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS	
	VEG.	REPR.						
1.	14.3	---	.1	13.5	---	---	1	
2.	14.8	---	.1	12.5	---	---	2	
3.	14.3	---	.1	18.5	---	---	2	
4.	14.8	---	.2	18.5	---	---	1	
5.	14.2	---	.1	16.7	---	---	1	
6.	14.2	---	.2	22.6	---	---	3	
7.	14.8	---	.1	11.5	---	---	2	
8.	14.8	---	.1	18.0	---	---	1	
9.	14.7	---	.2	21.2	---	---	2	
10.	14.8	---	.2	10.5	---	---	2	
11.	14.3	---	.2	15.5	---	---	2	
12.	14.6	---	.2	18.0	---	---	1	
13.	14.8	---	.1	9.0	---	---	1	
14.	14.3	15.8	.2	20.5	---	---	3	Head destroyed
15.	14.3	---	.2	21.8	---	---	1	
16.	14.9	---	---	---	---	---	1	Damaged plant
17.	14.4	---	.2	15.8	---	---	2	
18.	14.4	---	.2	17.1	---	---	1	
19.	16.1	---	.1	20.7	---	---	1	
20.	14.4	---	.2	33.0	---	---	4	

TABLE IV.

Agropyron smithii Study Area Bud Kimball Date 31 October 76

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS	
	VEG.	REPR.						
1.	17.0	---	.1	13.5	---	---	1	
2.	17.0	---	.1	12.5	---	---	2	
3.	17.0	---	.1	18.5	---	---	2	
4.	17.0	---	.2	18.5	---	---	1	
5.	17.0	---	.1	16.7	---	---	1	
6.	17.0	---	.2	22.6	---	---	3	
7.	17.0	---	.1	11.5	---	---	2	
8.	17.0	---	.1	18.0	---	---	1	
9.	17.0	---	.2	21.2	---	---	2	
10.	17.0	---	.2	10.5	---	---	2	
11.	17.0	---	.2	15.5	---	---	2	
12.	17.0	---	.2	18.0	---	---	1	
13.	17.0	---	.1	9.0	---	---	1	
14.	17.0	17.0	.2	20.5	---	---	3	Head destroyed
15.	17.0	---	.2	21.8	---	---	1	
16.	17.0	---	---	---	---	---	1	Damaged plant
17.	17.0	---	.2	15.8	---	---	2	
18.	17.0	---	.2	17.1	---	---	1	
19.	17.0	---	.1	20.7	---	---	1	
20.	17.0	---	.2	33.0	---	---	4	

TABLE IV.

Agropyron smithii Study Area Cumberland #3 Date 4 June 76

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS	
	VEG.	REPR.						
1.	4.5	---	.1	24.5	---	---	4	
2.	2.8	---	.2	13.7	---	---	2	
3.	4.4	---	.3	28.0	---	---	9	
4.	4.2	---	.3	17.5	---	---	2	New plant
5.	3.5	---	.1	17.7	---	---	3	
6.	3.2	---	.2	12.8	---	---	1	New plant
7.	4.4	---	.2	15.4	---	---	4	
8.	3.8	---	.2	28.2	---	---	2	
9.	2.6	---	.2	11.0	---	---	1	
10.	2.8	---	.2	14.0	---	---	1	
11.	3.8	---	.3	17.7	---	---	4	
12.	4.2	---	.2	19.5	---	---	2	
13.	3.8	---	.3	28.7	---	---	2	
14.	4.1	---	.2	21.1	---	---	6	
15.	3.4	---	.2	23.5	---	---	1	
16.	3.9	---	.3	17.1	---	---	1	
17.	3.9	---	.2	24.6	---	---	3	
18.	4.9	---	.3	25.5	---	---	4	New plant
19.	3.4	---	.2	12.8	---	---	1	
20.	3.9	---	.3	18.6	---	---	3	New plant

TABLE IV.

Agropyron smithii Study Area Cumberland #3 Date 14 July 76

PLANT NO.	PHENO. STAGE SCORE VEG.	PHENO. STAGE SCORE REPR.	MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
1.	4.4	---	.1	14.4	---	---	4
2.	14.5	---	.1	9.5	---	---	2
3.	14.4	---	.1	6.0	---	---	9
4.	14.1	---	.1	13.0	---	---	2
5.	14.2	---	.2	22.0	---	---	3
6.	14.0	---	.1	21.4	---	---	1
7.	4.8	---	.2	14.4	---	---	4
8.	14.1	---	.2	28.2	---	---	2
9.	14.0	---	.1	13.8	---	---	1
10.	14.1	---	.1	23.0	---	---	1
11.	14.2	---	.1	17.5	---	---	4
12.	14.6	---	.1	15.4	---	---	2
13.	14.2	---	.2	27.2	---	---	2
14.	14.4	---	.1	14.8	---	---	6
15.	14.3	---	.1	25.5	---	---	1
16.	4.8	---	.1	24.3	---	---	1
17.	14.1	5.2	.1	30.2	---	---	3
18.	14.2	---	.1	19.6	---	---	4
19.	14.2	---	.1	21.5	---	---	1
20.	14.2	---	.1	18.6	---	---	3

TABLE IV.

Agropyron smithii Study Area Cumberland #3 Date 4 August 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	14.2	---	.1	20.4	---	---	2
2.	14.4	---	.2	14.0	---	---	1
3.	14.3	---	.2	20.4	---	---	2
4.	14.2	---	.1	20.2	---	---	1
5.	14.8	---	.1	24.4	---	---	1
6.	14.3	---	.1	20.5	---	---	1
7.	14.4	---	.2	14.0	---	---	1
8.	14.4	---	.2	29.0	---	---	1
9.	14.2	---	.1	12.4	---	---	1
10.	14.4	---	.1	21.3	---	---	1
11.	14.3	---	.2	19.5	---	---	3
12.	14.6	---	.1	18.5	---	---	1
13.	14.3	---	.1	26.4	---	---	3
14.	14.3	---	.2	21.0	---	---	3
15.	14.2	---	.2	30.2	---	---	3
16.	14.4	---	.2	32.0	---	---	2
17.	14.2	---	.1	24.5	---	---	2
18.	14.2	---	.1	24.3	---	---	4
19.	14.3	---	.2	25.0	---	---	2
20.	14.2	---	.1	18.4	---	---	4

TABLE IV.

Agropyron smithii Study Area Cumberland #3 Date 19 August 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKELETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	14.4	---	.1	20.4	---	---	2
2.	14.8	---	.2	14.0	---	---	1
3.	14.5	---	.2	20.4	---	---	2
4.	14.6	---	.1	20.2	---	---	1
5.	14.8	---	.1	24.4	---	---	1
6.	14.5	---	.1	20.5	---	---	1
7.	14.2	---	.2	14.0	---	---	1
8.	14.7	---	.2	29.0	---	---	1
9.	14.6	---	.1	12.4	---	---	1
10.	14.4	---	.1	21.3	---	---	1
11.	14.6	---	.2	19.5	---	---	3
12.	14.9	---	.1	18.5	---	---	1
13.	14.6	---	.1	26.4	---	---	3
14.	14.8	---	.2	21.0	---	---	3
15.	14.6	---	.2	30.2	---	---	3
16.	14.5	---	.2	32.0	---	---	2
17.	14.4	---	.1	24.5	---	---	2
18.	14.6	---	.1	24.3	---	---	4
19.	14.7	---	.2	25.0	---	---	2
20.	14.5	---	.1	18.4	---	---	4

TABLE IV.

Agropyron smithii Study Area Cumberland #3 Date 18 September 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKELETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	16.1	---	.1	20.4	---	---	2
2.	14.9	---	.2	14.0	---	---	1
3.	14.9	---	.2	20.4	---	---	2
4.	14.9	---	.1	20.2	---	---	1
5.	14.9	---	.1	24.4	---	---	1
6.	16.1	---	.1	20.5	---	---	1
7.	16.2	---	.2	14.0	---	---	1
8.	14.9	---	.2	29.0	---	---	1
9.	16.1	---	.1	12.4	---	---	1
10.	14.9	---	.1	21.3	---	---	1
11.	14.9	---	.2	19.5	---	---	3
12.	14.9	---	.1	18.5	---	---	1
13.	14.9	---	.1	26.4	---	---	3
14.	14.9	---	.2	21.0	---	---	3
15.	16.2	---	.2	30.2	---	---	3
16.	14.9	---	.2	32.0	---	---	2
17.	16.5	---	.1	24.5	---	---	2
18.	16.2	---	.1	24.3	---	---	4
19.	14.9	---	.2	25.8	---	---	2
20.	16.1	---	.1	18.4	---	---	4

TABLE IV.

Agropyron smithii Study Area Cumberland #3 Date 7 November 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	17.0	---	.1	20.4	---	---	2
2.	17.0	---	.2	14.0	---	---	1
3.	17.0	---	.2	20.4	---	---	2
4.	17.0	---	.1	20.2	---	---	1
5.	17.0	---	.1	24.4	---	---	1
6.	17.0	---	.1	20.5	---	---	1
7.	17.0	---	.2	14.0	---	---	1
8.	17.0	---	.2	29.0	---	---	1
9.	17.0	---	.1	12.4	---	---	1
10.	17.0	---	.1	21.3	---	---	1
11.	17.0	---	.2	19.5	---	---	3
12.	17.0	---	.1	18.5	---	---	1
13.	17.0	---	.1	26.4	---	---	3
14.	17.0	---	.2	21.0	---	---	3
15.	17.0	---	.2	30.2	---	---	3
16.	17.0	---	.2	32.0	---	---	2
17.	17.0	---	.1	24.5	---	---	2
18.	17.0	---	.1	24.3	---	---	4
19.	17.0	---	.2	25.8	---	---	2
20.	17.0	---	.1	18.4	---	---	4

TABLE IV.

Agropyron smithii Study Area Demer Date 2 June 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	4.2	---	.3	24.8	---	---	8
2.	4.3	---	.2	16.0	---	---	4
3.	4.2	---	.3	18.8	---	---	3
4.	4.4	---	.2	22.2	---	---	2
5.	3.8	---	.2	19.0	---	---	4
6.	4.7	---	.3	17.2	---	---	5
7.	4.0	---	.2	20.1	---	---	1
8.	4.0	---	.2	14.0	---	---	1
9.	3.7	---	.2	19.4	---	---	2
10.	3.8	---	.2	15.5	---	---	8
11.	4.0	---	.2	16.3	---	---	1
12.	4.8	---	.2	14.8	---	---	2
13.	4.5	---	.3	23.6	---	---	3
14.	3.7	---	.2	14.2	---	---	3
15.	4.6	---	.2	17.1	---	---	1
16.	4.5	---	.3	11.2	---	---	3
17.	5.1	---	.3	22.5	---	---	3
18.	4.4	---	.2	13.8	---	---	2
19.	4.5	---	.2	18.0	---	---	6
20.	3.8	---	.3	20.3	---	---	4

TABLE IV.

Agropyron smithii Study Area Demer Date 6 July 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	4.2	---	.1	22.2	---	---	8
2.	4.6	---	.2	22.4	---	---	4
3.	4.8	---	.2	18.1	---	---	3
4.	3.9	---	.1	19.5	---	---	2
5.	4.2	---	.2	22.5	---	---	4
6.	4.6	---	.3	19.2	---	---	5
7.	4.1	---	.2	23.2	---	---	1
8.	4.4	---	.2	20.0	---	---	1
9.	4.5	---	.2	24.5	---	---	2
10.	3.0	---	.2	18.5	---	---	8
11.	4.3	---	.2	19.8	---	---	1
12.	4.3	---	.2	19.0	---	---	2
13.	4.8	---	.2	28.5	---	---	3
14.	4.4	---	.1	12.5	---	---	3
15.	4.4	---	.2	16.5	---	---	1
16.	4.2	---	.2	15.5	---	---	3
17.	4.8	---	.3	25.0	---	---	3
18.	4.8	---	.2	14.2	---	---	2
19.	4.2	---	.2	18.0	---	---	6
20.	4.4	---	.2	24.9	---	---	4

TABLE IV.

Agropyron smithii Study Area Demer Date 28 July 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS	
	VEG.	REPR.						
1.	14.2	---	.1	24.0	---	---	8	
2.	14.4	---	.1	14.0	---	---	4	
3.	14.8	---	.1	16.0	---	---	3	
4.	---	---	---	---	---	---	2	Broken
5.	14.5	---	.1	16.5	---	---	4	
6.	14.1	---	.1	17.5	---	---	5	
7.	14.0	---	.1	20.5	---	---	1	
8.	14.6	---	.1	13.5	---	---	1	
9.	14.8	---	.1	18.5	---	---	2	
10.	14.5	---	.1	18.0	---	---	8	
11.	14.4	---	.1	17.5	---	---	1	
12.	14.9	---	.1	10.5	---	---	2	
13.	14.2	---	.1	20.5	---	---	3	
14.	14.5	---	.1	6.0	---	---	3	
15.	14.4	---	.1	17.0	---	---	1	
16.	14.2	---	.1	12.5	---	---	3	
17.	14.0	---	.1	21.5	---	---	3	
18.	14.2	---	.1	16.5	---	---	2	
19.	14.3	---	.1	17.5	---	---	6	
20.	14.9	---	.1	21.0	---	---	4	

TABLE IV.

Agropyron smithii Study Area Demer Date 18 August 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	14.5	---	.1	14.0	---	---	8
2.	14.9	---	.1	6.3	---	---	4
3.	14.9	---	.1	16.0	---	---	3
4.	14.4	15.7	.1	---	20.5	---	2
5.	16.2	---	.1	20.0	---	---	4
6.	16.3	---	.1	16.0	---	---	5
7.	14.9	---	.1	20.5	---	---	1
8.	16.1	---	.1	13.5	---	---	1
9.	14.9	---	.1	11.7	---	---	2
10.	14.9	---	.1	18.0	---	---	8
11.	14.9	---	.1	17.5	---	---	1
12.	14.8	---	.1	10.5	---	---	2
13.	16.1	---	.1	18.5	---	---	3
14.	14.9	---	.1	6.0	---	---	3
15.	14.9	---	.1	17.0	---	---	1
16.	16.2	---	.1	11.5	---	---	3
17.	16.2	---	.1	21.0	---	---	3
18.	16.1	---	.1	10.0	---	---	2
19.	16.2	---	.1	19.5	---	---	6
20.	14.9	---	.1	21.0	---	---	4

TABLE IV.

Agropyron smithii Study Area Demer Date 3 October 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS	
	VEG.	REPR.						
1.	17.0	---	.1	14.0	---	---	8	
2.	17.0	---	.1	6.3	---	---	4	
3.	17.0	---	.1	16.0	---	---	3	
4.	17.0	17.0	.1	---	20.5	---	2	Broken
5.	17.0	---	.1	20.0	---	---	4	
6.	17.0	---	.1	16.0	---	---	5	
7.	17.0	---	.1	20.5	---	---	1	
8.	17.0	---	.1	13.5	---	---	1	
9.	17.0	---	.1	11.7	---	---	2	
10.	17.0	---	.1	18.0	---	---	8	
11.	17.0	---	.1	17.5	---	---	1	
12.	17.0	---	.1	10.5	---	---	2	
13.	17.0	---	.1	18.5	---	---	3	
14.	17.0	---	.1	6.0	---	---	3	
15.	17.0	---	.1	17.0	---	---	1	
16.	17.0	---	.1	11.5	---	---	3	
17.	17.0	---	.1	21.0	---	---	3	
18.	17.0	---	.1	10.0	---	---	2	
19.	17.0	---	.1	19.5	---	---	6	
20.	17.0	---	.1	21.0	---	---	4	

TABLE IV.

Agropyron smithii Study Area Farson Date 25 May 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	2.8	---	.2	17.5	---	---	1
2.	3.7	---	.3	13.4	---	---	2
3.	4.0	---	.3	18.4	---	---	4
4.	3.3	---	.3	21.2	---	---	2
5.	4.2	---	.3	14.0	---	---	2
6.	3.1	---	.2	17.5	---	---	2
7.	3.5	---	.2	8.8	---	---	2
8.	3.2	---	.3	13.2	---	---	4
9.	3.2	---	.3	17.6	---	---	1
10.	4.1	---	.2	14.4	---	---	2
11.	3.8	---	.3	19.5	---	---	1
12.	2.8	---	.1	8.7	---	---	1
13.	3.2	---	.2	12.0	---	---	1
14.	2.4	---	.2	12.9	---	---	1
15.	3.9	---	.2	18.0	---	---	1
16.	3.9	---	.2	18.0	---	---	1
17.	4.1	---	.2	15.6	---	---	3
18.	3.6	---	.2	16.1	---	---	1
19.	3.7	---	.1	10.4	---	---	1
20.	3.1	---	.1	8.7	---	---	1

TABLE IV.

Agropyron smithii Study Area Farson Date 1 July 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS	
	VEG.	REPR.						
1.	3.8	---	.2	18.0	---	---	1	
2.	3.8	---	.2	17.0	---	---	2	
3.	3.9	---	.3	20.0	---	---	3	
4.	4.2	---	.3	25.1	---	---	3	
5.	4.2	---	.2	13.5	---	---	2	
6.	3.9	---	.3	20.6	---	---	2	
7.	4.1	---	.2	12.3	---	---	1	
8.	4.3	---	.2	15.7	---	---	3	
9.	4.4	---	.3	19.9	---	---	1	
10.	4.2	---	.3	16.8	---	---	2	
11.	4.4	---	.3	27.4	---	---	1	
12.	4.2	---	.3	17.0	---	---	2	
13.	4.4	---	.3	24.2	---	---	2	
14.	4.2	---	.3	32.2	---	---	1	
15.	4.2	---	.3	23.0	---	---	1	
16.	4.4	---	.2	22.5	---	---	1	
17.	4.5	---	.2	19.3	---	---	3	
18.	4.4	---	.3	18.0	---	---	1	
19.	3.6	---	.1	15.7	---	---	1	
20.	3.8	---	.1	10.8	---	---	1	

TABLE IV.

Agropyron smithii Study Area Farson Date 3 August 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	14.2	---	.1	18.0	---	---	1
2.	14.2	---	.2	16.8	---	---	2
3.	14.4	---	.1	18.8	---	---	3
4.	14.2	---	.2	25.6	---	---	2
5.	14.3	---	.2	15.8	---	---	2
6.	14.4	---	.2	21.0	---	---	2
7.	14.4	---	.1	13.0	---	---	1
8.	14.5	---	.2	15.6	---	---	3
9.	14.5	---	.1	20.3	---	---	1
10.	14.5	---	.2	17.4	---	---	2
11.	14.4	---	.2	27.5	---	---	1
12.	14.6	---	.2	18.0	---	---	2
13.	14.2	---	.2	25.0	---	---	2
14.	14.2	---	.2	32.0	---	---	1
15.	14.4	---	.2	24.5	---	---	1
16.	14.3	---	.2	22.5	---	---	1
17.	14.2	---	.2	19.5	---	---	3
18.	14.3	---	.3	19.5	---	---	1
19.	14.3	---	.1	15.5	---	---	1
20.	14.3	---	.1	11.0	---	---	1

TABLE IV.

Agropyron smithii   Study Area Farson   Date 18 August 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	14.2	---	.1	18.0	---	---	1
2.	14.3	---	.2	16.8	---	---	2
3.	14.4	---	.1	18.8	---	---	3
4.	14.3	---	.2	25.6	---	---	2
5.	14.2	---	.2	15.8	---	---	2
6.	14.5	---	.2	21.0	---	---	2
7.	14.7	---	.1	13.0	---	---	1
8.	14.6	---	.2	15.6	---	---	3
9.	14.3	---	.1	20.3	---	---	1
10.	14.3	---	.2	17.4	---	---	2
11.	14.2	---	.2	27.5	---	---	1
12.	14.6	---	.2	18.0	---	---	2
13.	14.3	---	.2	25.0	---	---	2
14.	14.2	---	.2	32.0	---	---	1
15.	14.3	---	.2	24.5	---	---	1
16.	14.4	---	.2	22.5	---	---	1
17.	14.3	---	.2	19.5	---	---	3
18.	14.6	---	.3	19.5	---	---	1
19.	14.4	---	.1	15.5	---	---	1
20.	16.2	---	.1	11.0	---	---	1

TABLE IV.

Agropyron smithii Study Area Farson Date 18 September 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	16.2	---	.1	18.0	---	---	1
2.	16.1	---	.2	16.8	---	---	2
3.	16.0	---	.1	18.8	---	---	3
4.	16.0	---	.2	25.6	---	---	2
5.	16.2	---	.2	15.8	---	---	2
6.	14.9	---	.2	21.0	---	---	2
7.	16.0	---	.1	13.0	---	---	1
8.	16.2	---	.2	15.6	---	---	3
9.	16.1	---	.1	20.3	---	---	1
10.	16.3	---	.2	17.4	---	---	2
11.	16.6	---	.2	27.5	---	---	1
12.	14.9	---	.2	18.0	---	---	2
13.	16.3	---	.2	25.0	---	---	2
14.	14.9	---	.2	32.0	---	---	1
15.	16.6	---	.2	24.5	---	---	1
16.	16.5	---	.2	22.5	---	---	1
17.	16.4	---	.2	19.5	---	---	3
18.	14.9	---	.3	19.5	---	---	1
19.	14.9	---	.1	15.5	---	---	1
20.	16.0	---	.1	11.0	---	---	1

TABLE IV.

Agropyron smithii Study Area Farson Date 6 November 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	17.0	---	.1	18.0	---	---	1
2.	17.0	---	.2	16.8	---	---	2
3.	17.0	---	.1	18.8	---	---	3
4.	17.0	---	.2	25.8	---	---	2
5.	17.0	---	.2	15.8	---	---	2
6.	17.0	---	.2	21.0	---	---	2
7.	17.0	---	.1	13.0	---	---	1
8.	17.0	---	.2	15.6	---	---	3
9.	17.0	---	.1	20.3	---	---	1
10.	17.0	---	.2	17.4	---	---	2
11.	17.0	---	.2	27.5	---	---	1
12.	17.0	---	.2	18.0	---	---	2
13.	17.0	---	.2	25.0	---	---	2
14.	17.0	---	.2	32.0	---	---	1
15.	17.0	---	.2	24.5	---	---	1
16.	17.0	---	.2	22.5	---	---	1
17.	17.0	---	.2	19.5	---	---	3
18.	17.0	---	.3	19.5	---	---	1
19.	17.0	---	.1	15.5	---	---	1
20.	17.0	---	.1	11.0	---	---	1

TABLE IV.

Agropyron smithii Study Area Horse Creek Date 2 June 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	3.5	---	.3	17.8	---	---	1
2.	3.4	---	.4	15.2	---	---	1
3.	4.3	---	.4	19.8	---	---	1
4.	2.8	---	.3	13.4	---	---	1
5.	4.2	---	.4	19.5	---	---	1
6.	4.2	---	.3	19.5	---	---	2
7.	4.3	---	.3	18.0	---	---	1
8.	4.4	---	.3	21.5	---	---	1
9.	4.4	---	.3	20.2	---	---	2
10.	3.5	---	.3	22.0	---	---	3
11.	2.8	---	.2	19.5	---	---	2
12.	3.9	---	.4	19.5	---	---	1
13.	2.8	---	.2	18.5	---	---	1
14.	4.2	---	.3	17.0	---	---	2
15.	3.4	---	.2	13.0	---	---	2
16.	3.7	---	.3	19.0	---	---	1
17.	2.8	---	.3	17.4	---	---	3
18.	4.2	---	.4	23.2	---	---	1
19.	4.1	---	.4	17.0	---	---	1
20.	3.5	---	.4	17.5	---	---	3

TABLE IV.

Agropyron smithii Study Area Horse Creek Date 2 July 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	4.1	---	.4	20.6	---	---	1
2.	4.5	---	.4	22.7	---	---	1
3.	3.5	---	.2	10.6	---	---	1
4.	3.5	---	.2	12.4	---	---	1
5.	4.3	---	.2	19.2	---	---	1
6.	4.1	---	.3	16.7	---	---	2
7.	4.1	---	.3	20.7	---	---	1
8.	4.9	---	.4	18.5	---	---	1
9.	4.1	---	.2	7.6	---	---	2
10.	3.9	---	.2	18.6	---	---	3
11.	3.0	---	.2	17.5	---	---	2
12.	4.0	---	.1	8.0	---	---	1
13.	3.0	---	.2	16.5	---	---	1
14.	4.5	---	.3	16.2	---	---	2
15.	3.9	---	.3	16.0	---	---	2
16.	4.2	---	.2	15.1	---	---	1
17.	3.9	---	.3	15.3	---	---	3
18.	4.3	---	.4	23.4	---	---	1
19.	3.3	---	.2	12.0	---	---	1
20.	4.3	---	.4	17.5	---	---	3

TABLE IV.

Agropyron smithii Study Area Horse Creek Date 29 July 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	14.2	---	.2	21.0	---	---	1
2.	14.3	---	.3	26.6	---	---	3
3.	14.2	---	.3	20.0	---	---	1
4.	14.8	---	.2	19.0	---	---	2
5.	14.3	---	.2	21.8	---	---	2
6.	14.2	---	.2	20.6	---	---	1
7.	14.7	---	.2	15.5	---	---	1
8.	14.1	---	.2	20.5	---	---	1
9.	14.5	---	.1	15.8	---	---	2
10.	14.5	---	.2	18.0	---	---	2
11.	14.2	---	.2	35.0	---	---	3
12.	14.5	---	.2	21.0	---	---	2
13.	14.3	---	.2	24.5	---	---	2
14.	14.4	---	.1	15.0	---	---	2
15.	14.2	---	.2	18.0	---	---	2
16.	14.2	---	.2	18.0	---	---	1
17.	14.4	---	.1	15.5	---	---	1
18.	14.2	---	.2	15.0	---	---	2
19.	14.8	---	.2	16.4	---	---	1
20.	14.6	---	.2	17.0	---	---	3

TABLE IV.

Agropyron smithii Study Area Horse Creek Date 18 August 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	14.7	---	.2	20.3	---	---	1
2.	14.7	---	.3	20.7	---	---	3
3.	14.2	---	.3	19.1	---	---	1
4.	14.9	---	.2	---	---	---	2
5.	14.0	---	.2	18.1	---	---	2
6.	14.2	---	.2	8.5	---	---	1
7.	14.1	---	.2	20.6	---	---	1
8.	14.8	---	.2	21.0	---	---	1
9.	14.1	---	.1	18.0	---	---	2
10.	14.3	---	.2	15.6	---	---	2
11.	14.4	---	.2	24.2	---	---	3
12.	14.7	---	.2	18.0	---	---	2
13.	14.8	---	.2	23.7	---	---	2
14.	14.8	---	.1	16.0	---	---	2
15.	14.4	---	.2	12.2	---	---	2
16.	14.2	---	.2	18.8	---	---	1
17.	14.4	---	.1	16.9	---	---	1
18.	14.3	---	.2	13.9	---	---	2
19.	14.8	---	.2	16.2	---	---	1
20.	14.4	---	.2	17.7	---	---	3

TABLE IV.

Agropyron smithii Study Area Horse Creek Date 19 September 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	14.9	---	.2	21.0	---	---	1
2.	14.9	---	.3	26.6	---	---	3
3.	17.0	---	.3	20.0	---	---	1
4.	17.0	---	.2	19.0	---	---	2
5.	14.5	---	.2	21.8	---	---	2
6.	14.6	---	.2	20.6	---	---	1
7.	17.0	---	.2	15.5	---	---	1
8.	14.7	---	.2	20.5	---	---	1
9.	17.0	---	.1	15.8	---	---	2
10.	17.0	---	.2	18.0	---	---	2
11.	14.6	---	.2	35.0	---	---	3
12.	14.5	---	.2	21.0	---	---	2
13.	14.7	---	.2	24.5	---	---	2
14.	14.6	---	.1	15.0	---	---	2
15.	14.8	---	.2	18.0	---	---	2
16.	14.7	---	.2	18.0	---	---	1
17.	17.0	---	.1	15.5	---	---	1
18.	14.6	---	.2	15.0	---	---	2
19.	14.6	---	.2	16.4	---	---	1
20.	17.0	---	.2	17.0	---	---	3

TABLE IV.

Agropyron smithii Study Area Horse Creek Date 31 October 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	17.0	---	.2	21.0	---	---	1
2.	17.0	---	.3	26.6	---	---	3
3.	17.0	---	.3	20.0	---	---	1
4.	17.0	---	.2	19.0	---	---	2
5.	17.0	---	.2	21.8	---	---	2
6.	17.0	---	.2	20.6	---	---	1
7.	17.0	---	.2	15.5	---	---	1
8.	17.0	---	.2	20.5	---	---	1
9.	17.0	---	.1	15.8	---	---	2
10.	17.0	---	.2	18.0	---	---	2
11.	17.0	---	.2	35.0	---	---	3
12.	17.0	---	.2	21.0	---	---	2
13.	17.0	---	.2	24.5	---	---	2
14.	17.0	---	.1	15.0	---	---	2
15.	17.0	---	.2	18.0	---	---	2
16.	17.0	---	.2	18.0	---	---	1
17.	17.0	---	.1	15.5	---	---	1
18.	17.0	---	.2	15.0	---	---	2
19.	17.0	---	.2	16.4	---	---	1
20.	17.0	---	.2	17.0	---	---	3

TABLE IV.

Agropyron smithii Study Area Mesa Antelope Date 4 June 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS	
	VEG.	REPR.						
1.	3.4	---	.2	17.6	---	---	3	
2.	3.3	---	.3	14.2	---	---	1	
3.	3.4	---	.2	13.0	---	---	2	
4.	4.2	---	.2	21.7	---	---	1	New plant
5.	3.4	---	.2	15.0	---	---	3	
6.	3.2	---	.2	10.1	---	---	1	
7.	3.2	---	.3	25.0	---	---	2	
8.	3.1	---	.2	30.5	---	---	1	
9.	2.8	---	.2	11.5	---	---	1	
10.	3.2	---	.2	8.2	---	---	1	
11.	2.8	---	.2	15.5	---	---	1	
12.	3.2	---	.2	15.2	---	---	1	
13.	2.7	---	.2	11.2	---	---	1	
14.	3.7	---	.3	23.4	---	---	2	
15.	3.2	---	.2	21.0	---	---	1	
16.	3.5	---	.3	21.8	---	---	1	
17.	3.2	---	.3	21.4	---	---	2	
18.	3.1	---	.2	12.8	---	---	1	New plant
19.	4.2	---	.2	20.6	---	---	1	New plant
20.	3.4	---	.1	9.0	---	---	3	

TABLE IV.

Agropyron smithii Study Area Mesa Antelope Date 13 July 1976

PLANT NO.	PHENO. STAGE SCORE VEG.	REPR.	MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
1.	14.0	---	.2	19.0	---	---	3
2.	4.9	---	.1	23.5	---	---	1
3.	3.8	---	.1	15.0	---	---	2
4.	14.1	---	.1	21.8	---	---	1
5.	14.1	---	.1	15.2	---	---	3
6.	14.2	---	.1	10.5	---	---	1
7.	14.1	---	.2	24.0	---	---	2
8.	14.2	---	.1	29.5	---	---	1
9.	14.0	---	.1	23.3	---	---	1
10.	14.2	---	.1	10.5	---	---	1
11.	14.1	---	.1	16.0	---	---	1
12.	14.8	---	.1	14.2	---	---	1
13.	14.1	---	.1	21.5	---	---	1
14.	14.1	---	.2	13.0	---	---	2
15.	14.2	---	.1	20.8	---	---	1
16.	14.2	---	.2	22.6	---	---	1
17.	14.2	---	.1	21.0	---	---	2
18.	14.2	---	.1	12.6	---	---	1
19.	14.0	---	.2	20.6	---	---	1
20.	14.0	---	.1	12.4	---	---	3

TABLE IV.

Agropyron smithii Study Area Mesa Antelope Date 3 August 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS	
	VEG.	REPR.						
1.	14.0	---	.2	20.5	---	---	4	
2.	14.2	---	.1	13.0	---	---	1	
3.	14.2	---	.1	14.0	---	---	2	
4.	14.2	---	.1	20.0	---	---	1	
5.	14.4	---	.1	14.5	---	---	3	
6.	14.7	---	.1	10.2	---	---	1	
7.	14.6	---	.1	24.0	---	---	2	
8.	14.2	---	.1	27.6	---	---	1	
9.	14.1	---	.1	20.7	---	---	2	
10.	14.4	---	.1	9.5	---	---	1	
11.	14.7	---	.1	15.5	---	---	1	
12.	14.9	---	.1	14.1	---	---	1	
13.	14.6	---	.1	20.1	---	---	2	
14.	14.2	---	.2	10.0	---	---	2	Eaten
15.	14.5	---	.1	19.8	---	---	1	
16.	14.3	---	.2	21.5	---	---	1	
17.	14.1	---	.1	18.5	---	---	1	
18.	14.4	---	.1	12.2	---	---	1	
19.	14.2	---	.2	19.5	---	---	1	
20.	14.4	---	.1	10.5	---	---	2	

TABLE IV.

Agropyron smithii Study Area Mesa Antelope Date 18 September 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	16.8	---	.2	20.5	---	---	4
2.	16.8	---	.1	13.0	---	---	1
3.	16.7	---	.1	14.0	---	---	2
4.	16.7	---	.1	20.0	---	---	1
5.	16.4	---	.1	14.5	---	---	3
6.	16.2	---	.1	10.2	---	---	1
7.	16.7	---	.1	24.0	---	---	2
8.	16.7	---	.1	27.6	---	---	1
9.	16.5	---	.1	20.7	---	---	2
10.	16.1	---	.1	9.5	---	---	1
11.	14.9	---	.1	15.5	---	---	1
12.	14.9	---	.1	14.1	---	---	1
13.	14.9	---	.1	20.1	---	---	2
14.	16.5	---	.2	10.0	---	---	2
15.	16.3	---	.1	19.8	---	---	1
16.	16.8	---	.2	21.5	---	---	1
17.	16.3	---	.1	18.5	---	---	1
18.	16.1	---	.1	12.2	---	---	1
19.	16.8	---	.2	19.5	---	---	1
20.	16.3	---	.1	10.5	---	---	2

TABLE IV.

Agropyron smithii   Study Area Mesa Antelope   Date 7 November 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	17.0	---	.2	20.5	---	---	4
2.	17.0	---	.1	13.0	---	---	1
3.	17.0	---	.1	14.0	---	---	2
4.	17.0	---	.1	20.0	---	---	1
5.	17.0	---	.1	14.5	---	---	3
6.	17.0	---	.1	10.2	---	---	1
7.	17.0	---	.1	24.0	---	---	2
8.	17.0	---	.1	27.6	---	---	1
9.	17.0	---	.1	20.7	---	---	2
10.	17.0	---	.1	9.5	---	---	1
11.	17.0	---	.1	15.5	---	---	1
12.	17.0	---	.1	14.1	---	---	1
13.	17.0	---	.1	20.1	---	---	2
14.	17.0	---	.2	10.0	---	---	2
15.	17.0	---	.1	19.8	---	---	1
16.	17.0	---	.2	21.5	---	---	1
17.	17.0	---	.1	18.5	---	---	1
18.	17.0	---	.1	12.2	---	---	1
19.	17.0	---	.2	19.5	---	---	1
20.	17.0	---	.1	10.5	---	---	2

TABLE IV.

Agropyron smithii Study Area Owl Draw Date 1 June 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	4.5	---	.2	10.2	---	---	2
2.	2.6	---	.1	7.6	---	---	1
3.	4.6	---	.1	19.0	---	---	2
4.	4.1	---	.2	11.5	---	---	1
5.	4.3	---	.3	19.3	---	---	2
6.	3.8	---	.3	16.4	---	---	2
7.	3.8	---	.2	9.4	---	---	1
8.	4.3	---	.3	22.4	---	---	2
9.	4.2	---	.3	19.2	---	---	1
10.	3.8	---	.2	17.6	---	---	1
11.	3.7	---	.2	11.2	---	---	2
12.	3.8	---	.3	4.5	---	---	2
13.	3.9	---	.3	15.0	---	---	1
14.	3.6	---	.2	11.2	---	---	1
15.	4.2	---	.3	20.4	---	---	2
16.	4.1	---	.2	13.5	---	---	1
17.	4.2	---	.2	17.1	---	---	1
18.	2.9	---	.3	15.5	---	---	2
19.	3.2	---	.3	20.6	---	---	1
20.	2.7	---	.1	7.6	---	---	2

TABLE IV.

Agropyron smithii Study Area Owl Draw Date 12 July 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	4.3	---	.3	17	---	---	2
2.	2.8	---	.2	15	---	---	1
3.	2.4	6.0	.2	19	33	4	2
4.	3.6	---	.2	16	---	---	1
5.	4.8	---	.3	22	---	---	2
6.	3.5	---	.3	20	---	---	2
7.	3.0	---	.2	12	---	---	1
8.	4.2	---	.2	29	---	---	2
9.	3.9	---	.3	20	---	---	1
10.	3.4	---	.3	20	---	---	1
11.	4.2	---	.2	12	---	---	2
12.	4.1	---	.2	17	---	---	2
13.	4.0	---	.2	15	---	---	1
14.	4.0	---	.3	17	---	---	1
15.	4.2	---	.3	21	---	---	2
16.	3.8	---	.2	22	---	---	1
17.	4.5	---	.3	24	---	---	1
18.	3.2	---	.3	20	---	---	2
19.	3.5	---	.3	25	---	---	1
20.	4.0	---	.3	20	---	---	2

TABLE IV.

Agropyron smithii Study Area Owl Draw Date 26 July 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	14.2	---	.4	17.3	---	---	2
2.	14.5	---	.2	9.0	---	---	1
3.	14.1	15.2	.2	10.8	33	4	2
4.	14.2	---	.2	28.5	---	---	1
5.	14.3	---	.4	23.2	---	---	6
6.	14.2	---	.3	22.5	---	---	3
7.	14.4	---	.2	18.5	---	---	2
8.	14.2	---	.3	28.2	---	---	2
9.	14.4	---	.4	19.5	---	---	1
10.	14.2	---	.3	24.0	---	---	2
11.	14.8	---	.2	10.0	---	---	1
12.	14.1	---	.2	15.0	---	---	3
13.	14.4	---	.1	9.5	---	---	1
14.	14.7	---	.2	15.5	---	---	2
15.	14.3	---	.3	21.5	---	---	2
16.	14.6	---	.2	22.4	---	---	3
17.	14.0	---	.3	23.8	---	---	2
18.	14.7	---	.2	29.5	---	---	1
19.	14.0	---	.3	17.7	---	---	1
20.	14.3	---	.2	22.3	---	---	4

TABLE IV.

Agropyron smithii Study Area Owl Draw Date 21 August 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	14.2	---	.4	16.6	---	---	2
2.	14.3	---	.2	8.5	---	---	1
3.	14.5	15.3	.2	18.4	33	4	2
4.	14.2	---	.2	15.3	---	---	1
5.	14.3	---	.4	22.0	---	---	6
6.	14.2	---	.3	18.0	---	---	3
7.	14.4	---	.2	11.6	---	---	2
8.	14.2	---	.3	22.2	---	---	2
9.	14.1	---	.4	12.3	---	---	1
10.	14.3	---	.3	21.6	---	---	2
11.	14.4	---	.2	12.5	---	---	1
12.	14.4	---	.2	17.3	---	---	3
13.	14.4	---	.1	18.8	---	---	1
14.	14.5	---	.2	14.4	---	---	2
15.	14.4	---	.3	21.3	---	---	2
16.	14.3	---	.2	18.3	---	---	3
17.	14.2	---	.3	23.2	---	---	2
18.	4.4	---	.2	24.3	---	---	1
19.	14.3	---	.3	20.8	---	---	1
20.	14.3	---	.2	22.3	---	---	4

TABLE IV.

Agropyron smithii Study Area Owl Draw Date 29 October 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	17.0	17.0	.4	16.6	---	---	2
2.	17.0	17.0	.2	8.5	---	---	1
3.	17.0	17.0	.2	18.4	33	4	2
4.	17.0	17.0	.2	15.3	---	---	1
5.	17.0	17.0	.4	22.0	---	---	6
6.	17.0	17.0	.3	18.0	---	---	3
7.	17.0	17.0	.2	11.6	---	---	2
8.	17.0	17.0	.3	22.2	---	---	2
9.	17.0	17.0	.4	12.3	---	---	1
10.	17.0	17.0	.3	21.6	---	---	2
11.	17.0	17.0	.2	12.5	---	---	1
12.	17.0	17.0	.2	17.3	---	---	3
13.	17.0	17.0	.1	18.8	---	---	1
14.	17.0	17.0	.2	14.4	---	---	2
15.	17.0	17.0	.3	21.3	---	---	2
16.	17.0	17.0	.2	18.3	---	---	3
17.	17.0	17.0	.3	23.2	---	---	2
18.	17.0	17.0	.2	24.3	---	---	1
19.	17.0	17.0	.3	20.8	---	---	1
20.	17.0	17.0	.2	22.3	---	---	4

TABLE IV.

Agropyron smithii Study Area Red Wash #2 Date 4 June 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS	
	VEG.	REPR.						
1.	3.2	---	.2	7.4	---	---	3	
2.	2.0	---	.2	14.0	---	---	1	
3.	3.8	---	.3	29.2	---	---	3	New plant
4.	4.2	---	.2	19.0	---	---	1	New plant
5.	3.5	---	.1	11.2	---	---	1	New plant
6.	3.7	---	.2	14.8	---	---	2	
7.	3.8	---	.2	28.5	---	---	3	
8.	3.7	---	.3	20.5	---	---	5	
9.	3.5	---	.2	19.5	---	---	3	
10.	3.2	---	.2	17.0	---	---	3	New plant
11.	2.8	---	.2	20.9	---	---	1	
12.	3.2	---	.2	16.5	---	---	1	
13.	3.3	---	.2	16.0	---	---	3	
14.	3.4	---	.2	12.0	---	---	2	
15.	3.2	---	.1	8.5	---	---	1	
16.	3.2	---	.2	10.0	---	---	1	New plant
17.	3.7	---	.2	16.5	---	---	1	
18.	3.5	---	.2	15.0	---	---	1	
19.	3.4	---	.2	9.0	---	---	2	
20.	3.4	---	.2	8.5	---	---	4	

TABLE IV.

Agropyron smithii Study Area Red Wash #2 Date 15 July 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	14.0	---	.2	21.0	---	---	3
2.	14.7	---	.2	15.0	---	---	1
3.	14.0	---	.2	26.5	---	---	3
4.	14.1	---	.2	25.0	---	---	1
5.	3.5	---	.2	9.0	---	---	1
6.	14.1	---	.2	17.4	---	---	2
7.	14.2	---	.2	32.0	---	---	3
8.	14.2	---	.2	22.2	---	---	5
9.	14.3	---	.2	21.8	---	---	3
10.	14.2	---	.2	19.7	---	---	3
11.	14.7	---	.2	19.2	---	---	1
12.	14.3	---	.2	14.4	---	---	1
13.	14.3	---	.1	14.2	---	---	3
14.	14.1	---	.2	13.4	---	---	2
15.	14.5	---	.1	9.0	---	---	1
16.	14.2	---	.1	11.8	---	---	1
17.	14.2	---	.2	18.0	---	---	1
18.	14.4	---	.1	13.8	---	---	1
19.	14.4	---	.1	9.0	---	---	2
20.	14.4	---	.1	10.0	---	---	4

TABLE IV.

Agropyron smithii Study Area Red Wash #2 Date 6 August 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS	
	VEG.	REPR.						
1.	14.5	---	.2	18.5	---	---	3	
2.	---	---	---	---	---	---	---	Died
3.	14.4	---	.3	26.0	---	---	3	
4.	14.2	---	.2	21.5	---	---	1	
5.	14.0	---	.2	9.0	---	---	1	
6.	14.6	---	.2	19.5	---	---	2	
7.	14.4	---	.2	31.0	---	---	3	
8.	14.3	---	.2	26.0	---	---	5	
9.	14.6	---	.2	21.0	---	---	3	
10.	14.1	---	.2	20.0	---	---	3	
11.	14.3	---	.2	27.0	---	---	1	
12.	14.0	---	.2	15.0	---	---	1	
13.	14.7	---	.2	14.0	---	---	3	
14.	14.2	---	.2	13.0	---	---	2	
15.	14.8	---	.1	6.0	---	---	1	
16.	14.1	---	.2	12.0	---	---	1	
17.	14.0	---	.2	18.0	---	---	1	
18.	14.9	---	.2	14.0	---	---	1	
19.	14.1	---	.3	10.5	---	---	2	
20.	14.5	---	.1	10.0	---	---	4	

TABLE IV.

Agropyron smithii

Study Area Red Wash #2

Date 19 August 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS	
	VEG.	REPR.						
1.	14.4	---	.2	18.5	---	---	3	
2.	14.8	---	---	---	---	---	---	New plant
3.	14.6	---	.3	26.0	---	---	3	
4.	14.4	---	.2	21.5	---	---	1	
5.	14.5	---	.2	9.0	---	---	1	
6.	14.6	---	.2	19.5	---	---	2	
7.	14.4	---	.2	31.0	---	---	3	
8.	14.5	---	.2	26.0	---	---	5	
9.	14.6	---	.2	21.0	---	---	3	
10.	14.5	---	.2	20.0	---	---	3	
11.	14.6	---	.2	27.0	---	---	1	
12.	14.4	---	.2	15.0	---	---	1	
13.	14.5	---	.2	14.0	---	---	3	
14.	14.4	---	.2	13.0	---	---	2	
15.	16.2	---	.1	6.0	---	---	1	
16.	16.0	---	.2	12.0	---	---	1	
17.	14.5	---	.2	18.0	---	---	1	
18.	14.7	---	.2	14.0	---	---	1	
19.	14.6	---	.3	10.5	---	---	2	
20.	16.3	---	.1	10.0	---	---	4	

TABLE IV.

Agropyron smithii Study Area Red Wash #2 Date 17 September 1976

PLANT NO.	PHENO. STAGE SCORE VEG.	PHENO. STAGE SCORE REPR.	MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
1.	14.8	---	.2	18.5	---	---	3
2.	14.9	---	---	---	---	---	---
3.	14.9	---	.3	26.0	---	---	3
4.	14.5	---	.2	21.5	---	---	1
5.	16.4	---	.2	9.0	---	---	1
6.	16.1	---	.2	19.5	---	---	2
7.	16.6	---	.2	31.0	---	---	3
8.	16.2	---	.2	26.0	---	---	5
9.	14.9	---	.2	21.0	---	---	3
10.	16.2	---	.2	20.0	---	---	3
11.	14.9	---	.2	27.0	---	---	1
12.	16.0	---	.2	15.0	---	---	1
13.	14.9	---	.2	14.0	---	---	3
14.	14.9	---	.2	13.0	---	---	2
15.	14.9	---	.1	6.0	---	---	1
16.	14.9	---	.2	12.0	---	---	1
17.	16.3	---	.2	18.0	---	---	1
18.	14.9	---	.2	14.0	---	---	1
19.	16.3	---	.3	10.5	---	---	2
20.	16.0	---	.1	10.0	---	---	4

TABLE IV.

Agropyron smithii Study Area Red Wash #2 Date 6 November 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	17.0	---	.2	18.5	---	---	3
2.	17.0	---	---	---	---	---	---
3.	17.0	---	.3	26.0	---	---	3
4.	17.0	---	.2	21.5	---	---	1
5.	17.0	---	.2	9.0	---	---	1
6.	17.0	---	.2	19.5	---	---	2
7.	17.0	---	.2	31.0	---	---	3
8.	17.0	---	.2	26.0	---	---	5
9.	17.0	---	.2	21.0	---	---	3
10.	17.0	---	.2	20.0	---	---	3
11.	17.0	---	.2	27.0	---	---	1
12.	17.0	---	.2	15.0	---	---	1
13.	17.0	---	.2	14.0	---	---	3
14.	17.0	---	.2	13.0	---	---	2
15.	17.0	---	.1	6.0	---	---	1
16.	17.0	---	.2	12.0	---	---	1
17.	17.0	---	.2	18.0	---	---	1
18.	17.0	---	.2	14.0	---	---	1
19.	17.0	---	.3	10.5	---	---	2
20.	17.0	---	.1	10.0	---	---	4

TABLE IV.

Agropyron smithii Study Area Shoshoni Ant #7 Date 3 June 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS	
	VEG.	REPR.						
1.	4.2	---	.2	16.0	---	---	1	New plant
2.	2.3	---	.2	16.0	---	---	2	New plant
3.	4.4	---	.3	18.0	---	---	1	New plant
4.	3.2	---	.2	11.4	---	---	2	New plant
5.	3.4	---	.2	12.8	---	---	1	
6.	3.2	---	.3	18.5	---	---	1	
7.	3.8	---	.3	15.5	---	---	1	New plant
8.	3.5	---	.3	13.4	---	---	1	New plant
9.	2.8	---	.3	12.4	---	---	1	
10.	4.2	---	.3	15.2	---	---	1	New plant
11.	1.4	---	.3	5.7	---	---	1	
12.	3.6	---	.2	12.9	---	---	1	
13.	2.8	---	.2	12.6	---	---	1	
14.	3.3	---	.3	9.2	---	---	1	New plant
15.	2.4	---	.1	8.8	---	---	1	New plant
16.	3.7	---	.3	11.5	---	---	1	New plant
17.	3.1	---	.1	8.7	---	---		
18.	2.5	---	.1	7.0	---	---	1	
19.	2.2	---	.1	3.7	---	---	1	New plant
20.	2.7	---	.2	10.5	---	---	1	

TABLE IV.

Agropyron smithii Study Area Shoshoni Ant #7 Date 6 July 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS	
	VEG.	REPR.						
1.	3.7	---	.2	19.7	---	---	1	
2.	2.8	---	.1	19.5	---	---	2	
3.	4.7	---	.3	24.1	---	---	1	
4.	3.4	---	.2	11.5	---	---	2	Broken
5.	3.5	---	.2	16.5	---	---	1	
6.	3.7	---	.2	20.0	---	---	1	
7.	3.1	---	.3	18.5	---	---	1	
8.	3.7	---	.3	16.0	---	---	1	
9.	2.8	---	.2	18.5	---	---	1	
10.	3.6	---	.2	16.5	---	---	1	
11.	2.8	---	.2	17.8	---	---	1	
12.	3.0	---	.2	10.1	---	---	1	
13.	2.2	---	.2	12.5	---	---	1	
14.	3.8	---	.2	10.0	---	---	1	
15.	3.8	---	.2	15.2	---	---	1	New plant
16.	3.7	---	.3	11.5	---	---	1	New plant
17.	3.3	---	.1	8.5	---	---	1	
18.	2.4	---	.1	6.5	---	---	1	New plant
19.	2.4	---	.2	8.7	---	---	1	
20.	2.2	---	.1	10.2	---	---	1	

TABLE IV.

Agropyron smithii Study Area Shoshoni Ant #7 Date 3 August 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS	
	VEG.	REPR.						
1.	14.9	---	.3	15.0	---	---	1	
2.	14.4	---	.2	14.0	---	---	1	
3.	14.2	---	.3	21.0	---	---	2	
4.	14.7	---	---	---	---	---	1	Broken
5.	14.9	---	.2	10.2	---	---	1	
6.	14.4	---	.3	16.6	---	---	1	
7.	14.3	---	.4	16.4	---	---	1	
8.	14.3	---	.3	12.2	---	---	1	
9.	14.3	---	.2	14.4	---	---	1	
10.	14.4	---	.2	13.5	---	---	1	
11.	14.4	---	.3	16.0	---	---	2	
12.	14.9	---	.2	11.0	---	---	1	
13.	14.9	---	.2	12.5	---	---	1	
14.	14.9	---	.3	17.5	---	---	1	
15.	14.7	---	.2	14.0	---	---	2	
16.	14.9	---	.3	19.0	---	---	1	
17.	14.5	---	---	---	---	---	1	Broken
18.	14.5	---	.1	6.5	---	---	1	
19.	14.5	---	.2	18.0	---	---	4	
20.	14.5	---	---	---	---	---	1	

TABLE IV.

Agropyron smithii Study Area Shoshoni Ant #7 Date 18 August 1976

PLANT NO.	PHENO. STAGE SCORE VEG.	REPR.	MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS	
1.	14.9	---	.3	15.0	---	---	1	
2.	14.8	---	.3	19.0	---	---	1	
3.	14.4	---	.3	24.0	---	---	2	
4.	14.7	---	.2	16.0	---	---	1	
5.	14.9	---	.2	22.0	---	---	1	
6.	14.5	---	.2	29.0	---	---	1	
7.	14.2	---	.2	17.0	---	---	1	
8.	14.9	---	.2	14.0	---	---	1	
9.	14.5	---	.2	10.0	---	---	1	
10.	14.6	---	.2	14.5	---	---	1	
11.	14.4	---	.2	16.0	---	---	2	
12.	14.9	---	.3	11.0	---	---	1	
13.	14.2	---	.2	17.5	---	---	1	
14.	14.9	---	.2	16.5	---	---	1	
15.	14.5	---	.2	14.5	---	---	2	
16.	14.9	---	.2	19.0	---	---	1	
17.	14.5	---	.2	15.0	---	---	1	
18.	16.0	---	.1	6.0	---	---	1	
19.	14.6	---	.2	19.5	---	---	4	
20.	14.9	---	---	---	---	---	---	Died

TABLE IV.

Agropyron smithii Study Area Shoshoni Ant #7 Date 30 October 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	14.8	---	.3	15.0	---	---	1
2.	14.8	---	.3	19.0	---	---	1
3.	14.6	---	.3	24.0	---	---	2
4.	14.8	---	.2	16.0	---	---	1
5.	14.8	---	.2	22.0	---	---	1
6.	14.8	---	.2	29.0	---	---	1
7.	14.7	---	.2	17.0	---	---	1
8.	14.7	---	.2	14.0	---	---	1
9.	14.8	---	.2	10.0	---	---	1
10.	14.8	---	.2	14.5	---	---	1
11.	14.7	---	.2	16.0	---	---	2
12.	14.8	---	.3	11.0	---	---	1
13.	14.7	---	.2	17.5	---	---	1
14.	14.8	---	.2	16.5	---	---	1
15.	14.8	---	.2	14.5	---	---	2
16.	14.8	---	.2	19.0	---	---	1
17.	14.8	---	.2	15.0	---	---	1
18.	14.8	---	.1	6.0	---	---	1
19.	14.8	---	.2	19.5	---	---	4
20.	14.8	---	---	---	---	---	---

TABLE IV.

Agropyron smithii Study Area Sweetwater Date 3 June 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	3.7	---	.3	23.5	---	---	1
2.	2.4	---	.1	8.0	---	---	1
3.	4.5	---	.2	11.4	---	---	3
4.	3.5	---	.2	13.2	---	---	1
5.	3.2	---	.1	16.5	---	---	2
6.	3.2	---	.2	19.1	---	---	3
7.	3.2	---	.1	11.1	---	---	2
8.	3.7	---	.2	16.6	---	---	1
9.	3.7	---	.2	15.8	---	---	3
10.	3.7	---	.2	9.5	---	---	2
11.	3.4	---	.2	17.1	---	---	1
12.	3.4	---	.2	14.8	---	---	3
13.	3.4	---	.3	12.0	---	---	2
14.	3.2	---	.3	15.1	---	---	2
15.	3.7	---	.3	20.2	---	---	1
16.	3.2	---	.2	11.0	---	---	2
17.	3.4	---	.3	11.5	---	---	1
18.	3.2	---	.3	17.2	---	---	3
19.	3.2	---	.2	12.5	---	---	2
20.	3.2	---	.2	8.5	---	---	2

TABLE IV.

Agropyron smithii Study Area Sweetwater Date 1 July 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS	
	VEG.	REPR.						
1.	4.3	---	.3	18.2	---	---	1	
2.	3.2	---	.2	9.2	---	---	1	
3.	3.4	---	.3	11.5	---	---	3	
4.	4.2	---	.3	12.2	---	---	1	Dead (new plant)
5.	3.6	---	.3	15.6	---	---	2	
6.	3.8	---	.3	17.2	---	---	3	
7.	3.5	---	.2	12.2	---	---	2	
8.	3.4	---	.3	16.5	---	---	1	
9.	3.8	---	.3	15.5	---	---	3	
10.	3.2	---	.2	12.4	---	---	2	
11.	4.4	---	.3	19.0	---	---	1	
12.	3.7	---	.3	15.4	---	---	3	
13.	3.4	---	.4	12.0	---	---	2	
14.	3.7	---	.3	14.6	---	---	2	
15.	4.1	---	.3	14.5	---	---	1	
16.	4.2	---	.3	14.5	---	---	2	
17.	4.0	---	.3	15.6	---	---	1	
18.	4.4	---	.3	15.7	---	---	3	
19.	3.0	---	.1	8.0	---	---	2	
20.	3.2	---	.2	12.2	---	---	2	

TABLE IV.

Agropyron smithii Study Area Sweetwater Date 2 August 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS	
	VEG.	REPR.						
1.	14.3	---	.3	23.4	---	---	1	
2.	14.3	---	.2	6.5	---	---	1	
3.	14.2	---	.2	16.4	---	---	1	
4.	14.0	---	.3	5.0	---	---	2	
5.	14.2	---	.1	15.5	---	---	2	
6.	14.4	---	.2	16.5	---	---	2	
7.	14.4	---	.2	12.5	---	---	2	
8.	14.2	---	.1	11.4	---	---	7	
9.	14.2	---	.1	10.5	---	---	2	
10.	14.4	---	.2	17.2	---	---	2	
11.	14.4	---	.2	7.4	---	---	1	
12.	14.7	---	.2	18.0	---	---	3	
13.	14.6	---	.2	20.0	---	---	3	
14.	14.4	---	.2	15.0	---	---	3	New plant
15.	14.3	---	.2	19.0	---	---	4	
16.	14.1	---	.2	14.5	---	---	4	
17.	14.1	---	.2	20.2	---	---	4	
18.	14.4	---	.2	13.0	---	---	2	
19.	14.6	---	.1	9.0	---	---	1	
20.	14.6	---	.1	15.2	---	---	4	

TABLE IV.

Agropyron smithii Study Area Sweetwater Date 18 August 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	14.4	---	.3	23.4	---	---	1
2.	16.0	---	.2	6.5	---	---	1
3.	14.5	---	.2	16.4	---	---	1
4.	14.3	---	.3	5.0	---	---	2
5.	14.4	---	.1	15.5	---	---	2
6.	14.5	---	.2	16.5	---	---	2
7.	14.4	---	.2	12.5	---	---	2
8.	14.5	---	.1	11.4	---	---	7
9.	14.6	---	.2	10.5	---	---	2
10.	14.5	---	.2	17.2	---	---	2
11.	14.4	---	.2	7.4	---	---	1
12.	14.3	---	.2	18.0	---	---	3
13.	14.3	---	.2	20.0	---	---	3
14.	14.3	---	.2	15.0	---	---	3
15.	14.3	---	.2	19.0	---	---	4
16.	14.4	---	.2	14.5	---	---	4
17.	14.3	---	.2	20.2	---	---	4
18.	14.5	---	.2	13.0	---	---	2
19.	14.4	---	.1	9.0	---	---	1
20.	14.6	---	.1	15.2	---	---	4

TABLE IV.

Agropyron smithii Study Area Sweetwater Date 19 September 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	16.1	---	.3	23.4	---	---	1
2.	14.9	---	.2	6.5	---	---	1
3.	14.9	---	.2	16.4	---	---	1
4.	16.1	---	.3	5.0	---	---	2
5.	14.9	---	.1	15.5	---	---	2
6.	16.1	---	.2	16.5	---	---	2
7.	14.9	---	.2	12.5	---	---	2
8.	16.2	---	.1	11.4	---	---	7
9.	16.1	---	.2	10.5	---	---	2
10.	16.0	---	.2	17.2	---	---	2
11.	14.9	---	.2	7.4	---	---	1
12.	14.9	---	.2	18.0	---	---	3
13.	16.0	---	.2	20.0	---	---	3
14.	16.0	---	.2	15.0	---	---	3
15.	16.2	---	.2	19.0	---	---	4
16.	16.1	---	.2	14.5	---	---	4
17.	16.1	---	.2	20.2	---	---	4
18.	16.0	---	.2	13.0	---	---	2
19.	16.1	---	.1	9.0	---	---	1
20.	16.0	---	.1	15.2	---	---	4

TABLE IV.

Agropyron smithii Study Area Sweetwater Date 1 November 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	17.0	---	.3	23.4	---	---	1
2.	17.0	---	.2	6.5	---	---	1
3.	17.0	---	.2	16.4	---	---	1
4.	17.0	---	.3	5.0	---	---	2
5.	17.0	---	.1	15.5	---	---	2
6.	17.0	---	.2	16.5	---	---	2
7.	17.0	---	.2	12.5	---	---	2
8.	17.0	---	.1	11.4	---	---	7
9.	17.0	---	.2	10.5	---	---	2
10.	17.0	---	.2	17.2	---	---	2
11.	17.0	---	.2	7.4	---	---	1
12.	17.0	---	.2	18.0	---	---	3
13.	17.0	---	.2	20.0	---	---	3
14.	17.0	---	.2	15.0	---	---	3
15.	17.0	---	.2	19.0	---	---	4
16.	17.0	---	.2	14.5	---	---	4
17.	17.0	---	.2	20.2	---	---	4
18.	17.0	---	/2	13.0	---	---	2
19.	17.0	---	.1	9.0	---	---	1
20.	17.0	---	.1	15.2	---	---	4

TABLE IV.

Agropyron smithii Study Area Upper Gov't Draw Date 3 June 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS	
	VEG.	REPR.						
1.	4.5	---	.2	19.0	---	---	1	
2.	3.8	---	.2	15.5	---	---	3	
3.	3.5	---	.3	19.5	---	---	2	
4.	4.2	---	.3	25.4	---	---	2	
5.	3.8	---	.3	17.4	---	---	2	
6.	3.8	---	.3	23.0	---	---	1	
7.	3.8	---	.3	22.1	---	---	3	
8.	3.2	---	.2	16.6	---	---	1	
9.	3.8	---	.2	19.1	---	---	2	
10.	3.7	---	.2	17.5	---	---	2	
11.	3.9	---	.2	17.5	---	---	2	
12.	3.3	---	.2	17.5	---	---	2	
13.	3.7	---	.2	18.5	---	---	1	
14.	4.3	---	.3	35.7	---	---	2	
15.	3.9	---	.3	19.8	---	---	1	
16.	4.2	---	.3	14.0	---	---	2	
17.	---	---	---	---	---	---	---	Died
18.	4.2	---	.3	26.5	---	---	1	
19.	3.0	---	.1	19.1	---	---	2	
20.	---	---	---	---	---	---	---	Died

TABLE IV.

Agropyron smithii Study Area Upper Gov't Draw Date 13 July 1976

PLANT NO.	PHENO. STAGE SCORE VEG.	PHENO. STAGE SCORE REPR.	MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS	
1.	14.4	---	.1	16.0	---	---	1	
2.	14.0	---	.1	17.4	---	---	3	
3.	14.0	---	.1	16.8	---	---	2	
4.	14.0	---	.1	13.0	---	---	2	
5.	5.7	---	.1	6.0	---	---	2	
6.	14.1	---	.2	23.5	---	---	1	
7.	14.2	---	.2	22.8	---	---	3	
8.	14.4	---	.2	15.8	---	---	1	
9.	14.4	---	.1	12.6	---	---	2	
10.	14.3	---	.1	15.2	---	---	2	
11.	14.1	---	.2	11.5	---	---	2	
12.	5.1	---	.2	18.0	---	---	2	
13.	14.2	---	.1	17.1	---	---	1	
14.	14.1	---	.2	23.0	---	---	2	
15.	14.1	---	.2	20.5	---	---	1	
16.	14.0	---	.2	14.5	---	---	2	
17.	14.4	---	.2	24.7	---	---	3	New plant
18.	14.8	---	.2	9.5	---	---	1	
19.	14.6	---	.1	15.5	---	---	2	
20.	14.3	---	.1	19.0	---	---	1	New plant

TABLE IV.

Agropyron smithii Study Area Upper Gov't Draw Date 3 August 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	14.5	---	.2	13.2	---	---	1
2.	14.8	---	.2	16.0	---	---	2
3.	14.3	---	.1	20.4	---	---	2
4.	14.3	---	.1	23.5	---	---	2
5.	14.2	---	.1	14.8	---	---	1
6.	14.3	---	.1	21.0	---	---	5
7.	14.8	---	.1	22.6	---	---	2
8.	14.5	---	.2	16.2	---	---	1
9.	14.6	---	.1	20.0	---	---	2
10.	14.9	---	.1	17.2	---	---	2
11.	14.5	---	.2	24.0	---	---	2
12.	14.7	---	.1	17.0	---	---	1
13.	14.4	---	.1	16.0	---	---	1
14.	14.6	---	.1	21.0	---	---	2
15.	14.9	---	.2	20.0	---	---	1
16.	14.9	---	.2	19.6	---	---	1
17.	14.7	---	.1	20.0	---	---	3
18.	14.9	---	.2	14.0	---	---	1
19.	14.9	---	.1	19.5	---	---	2
20.	14.9	---	.1	15.4	---	---	1

TABLE IV.

Agropyron smithii Study Area Upper Gov't Draw Date 18 August 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS	
	VEG.	REPR.						
1.	14.0	---	.2	13.2	---	---	1	
2.	14.2	---	.2	16.0	---	---	2	
3.	14.0	---	.1	20.4	---	---	2	
4.	14.3	---	.1	23.5	---	---	2	
5.	14.1	---	.1	14.8	---	---	1	
6.	14.2	---	.1	21.0	---	---	5	
7.	14.3	---	.1	22.6	---	---	2	
8.	14.4	---	.2	16.2	---	---	1	
9.	14.2	---	.1	20.0	---	---	2	
10.	14.4	---	.1	17.2	---	---	2	
11.	14.2	---	.2	24.0	---	---	2	
12.	14.1	---	.1	17.0	---	---	1	
13.	14.3	---	.1	16.0	---	---	1	
14.	14.2	---	.1	21.0	---	---	2	
15.	---	---	---	---	---	---	---	Died
16.	14.0	---	.2	19.6	---	---	1	
17.	---	---	---	---	---	---	---	Died
18.	14.6	---	.2	14.0	---	---	1	
19.	14.5	---	.1	19.0	---	---	2	
20.	---	---	---	---	---	---	---	Died

TABLE IV.

Agropyron smithii Study Area Upper Gov't Draw Date 18 September 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS	
	VEG.	REPR.						
1.	16.7	---	.2	13.2	---	---	1	
2.	16.3	---	.2	16.0	---	---	2	
3.	16.7	---	.1	20.4	---	---	2	
4.	16.7	---	.1	23.5	---	---	2	
5.	16.6	---	.1	14.8	---	---	1	
6.	16.4	---	.1	21.0	---	---	5	
7.	16.2	---	.1	22.6	---	---	2	
8.	16.2	---	.2	16.2	---	---	1	
9.	16.1	---	.1	20.0	---	---	2	
10.	16.2	---	.1	17.2	---	---	2	
11.	16.5	---	.2	24.0	---	---	2	
12.	16.7	---	.1	17.0	---	---	1	
13.	16.1	---	.1	16.0	---	---	1	
14.	16.7	---	.1	2.0	---	---	2	
15.	14.9	---	.2	20.0	---	---	1	New plant
16.	16.2	---	.2	19.6	---	---	1	
17.	14.9	---	.1	20.0	---	---	3	New plant
18.	14.9	---	.2	14.0	---	---	1	
19.	16.0	---	.1	19.0	---	---		
20.	14.9	---	.1	15.4	---	---	1	New plant

TABLE IV.

Agropyron smithii Study Area Upper Gov't Draw Date 6 November 1976

PLANT NO.	PHENO. STAGE SCORE		MAX. LEAF WIDTH cm	MAX. LEAF HGTH. cm	MAX. SPIKE HGTH. cm	NOS. SPIKE-LETS/ CULM	NOS. OF VEG. PLANTS
	VEG.	REPR.					
1.	17.0	---	.2	13.2	---	---	1
2.	17.0	---	.2	16.0	---	---	2
3.	17.0	---	.1	20.4	---	---	2
4.	17.0	---	.1	23.5	---	---	2
5.	17.0	---	.1	14.8	---	---	1
6.	17.0	---	.1	21.0	---	---	5
7.	17.0	---	.1	22.6	---	---	2
8.	17.0	---	.2	16.2	---	---	1
9.	17.0	---	.1	20.0	---	---	2
10.	17.0	---	.1	17.2	---	---	2
11.	17.0	---	.2	24.0	---	---	2
12.	17.0	---	.1	17.0	---	---	1
13.	17.0	---	.1	16.0	---	---	1
14.	17.0	---	.1	2.0	---	---	2
15.	17.0	---	.2	20.0	---	---	1
16.	17.0	---	.2	19.6	---	---	1
17.	17.0	---	.1	20.0	---	---	3
18.	17.0	---	.2	14.0	---	---	1
19.	17.0	---	.1	19.0	---	---	2
20.	17.0	---	.1	15.4	---	---	1

TABLE IV.

Agropyron spicatum Study Area Cedar Mountain Date 4 June 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKE-LETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm	cm	cm	cm				
1.	4.2	---	---	---	---	.3	16.8	---	---	---	220	
2.	4.4	---	---	---	---	.2	12.6	---	---	---	8	
3.	3.8	---	---	---	---	.3	16.5	---	---	---	17	
4.	4.4	---	---	---	---	.3	27.3	---	---	---	120	
5.	3.8	---	---	---	---	.3	28.3	---	---	---	41	
6.	4.2	---	---	---	---	.3	18.4	---	---	---	110	
7.	4.2	---	---	---	---	.3	19.5	---	---	---	75	
8.	3.7	---	---	---	---	.2	20.0	---	---	---	44	
9.	3.8	---	---	---	---	.3	25.4	---	---	---	50	
10.	3.2	---	---	---	---	.2	20.5	---	---	---	70	
11.	3.8	---	---	---	---	.2	20.0	---	---	---	55	
12.	3.4	---	---	---	---	.2	11.5	---	---	---	35	
13.	4.2	---	---	---	---	.2	12.0	---	---	---	27	
14.	3.6	---	---	---	---	.2	13.5	---	---	---	14	
15.	3.7	---	---	---	---	.3	16.6	---	---	---	55	
16.	4.4	5.0	---	---	---	.3	32.0	26.0	---	11	54	
17.	3.4	---	---	---	---	.2	18.5	---	---	---	155	
18.	3.2	---	---	---	---	.2	23.0	---	---	---	110	
19.	4.4	---	---	---	---	.2	34.4	27.5	---	3	35	
20.	3.2	---	---	---	---	.3	13.5	---	---	---	14	

TABLE IV.

Agropyron spicatum   Study Area Cedar Mountain   Date 15 July 1976

PLANT NO.	PHENO. STAGE SCORE VEG	PHENO. STAGE SCORE REPR	CLUMP LGTH cm	CLUMP WIDTH cm	CLUMP DIAM cm	MAX LEAF WIDTH cm	MAX LEAF HGHT cm	MAX SPIKE HGHT cm	NOS SPIKE-LETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
1.	14.4	---	---	---	---	.1	20.0	---	---	---	220	
2.	14.2	---	---	---	---	.1	17.1	---	---	---	8	
3.	14.1	---	---	---	---	.1	15.0	---	---	---	17	
4.	14.0	---	---	---	---	.1	27.0	---	---	---	120	
5.	14.2	11.2	---	---	---	.1	35.0	42.0	6	3	12	
6.	14.5	---	---	---	---	.1	17.1	---	---	---	110	
7.	14.2	---	---	---	---	.1	15.0	---	---	---	75	
8.	14.6	---	---	---	---	.1	26.0	---	---	---	44	
9.	14.6	---	---	---	---	.1	29.0	---	---	---	50	
10.	14.2	---	---	---	---	.1	19.0	---	---	---	70	
11.	14.2	---	---	---	---	.1	23.0	---	---	---	55	
12.	14.7	11.4	---	---	---	.1	11.0	16.0	3	3	9	
13.	4.8	---	---	---	---	.1	10.5	---	---	---	27	
14.	4.7	11.5	---	---	---	.1	14.0	16.0	4	3	7	
15.	14.4	---	---	---	---	.1	18.0	---	---	---	55	
16.	4.4	11.8	---	---	---	.1	31.0	46.0	6	7	19	
17.	14.0	---	---	---	---	.1	16.0	---	---	---	155	
18.	14.2	---	---	---	---	.1	23.0	---	---	---	110	
19.	14.2	11.7	---	---	---	.1	29.0	46	9	4	8	
20.	4.8	11.4	---	---	---	.1	24.0	39	7	5	12	

TABLE IV.

Agropyron spicatum Study Area Cedar Mountain Date 5 August 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKE-LETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm	cm	cm	cm				
1.	14.4	---	14.0	7.0	---	.2	22.7	---	---	---	∞	
2.	14.3	---	3.0	7.0	---	.1	16.0	---	---	---	7.0	
3.	14.3	---	4.0	2.0	---	.3	16.5	---	---	---	12.0	
4.	14.1	---	28.0	21.0	---	.3	33.6	---	---	---	∞	
5.	14.2	15.4	22.0	20.0	---	.3	33.5	29.0	6	10.0	∞	
6.	14.1	13.5	41.0	23.0	---	.3	22.2	18.5	5	7	∞	
7.	14.4	---	23.0	18.0	---	.2	19.6	---	---	---	∞	
8.	14.2	---	10.0	4.0	---	.2	26.3	---	---	---	---	
9.	14.1	---	10.0	5.0	---	.3	28.0	---	---	---	---	
10.	14.1	---	8.0	4.0	---	.2	21.7	---	---	---	---	
11.	14.2	13.7	14.0	10.0	---	.2	19.4	16.5	4	2	---	
12.	14.2	11.4	7.0	1.5	---	.1	12.0	16.0	3	3	10.0	
13.	14.2	---	17.0	6.0	---	.2	12.0	---	---	---	32.0	
14.	14.1	---	4.0	3.0	---	.2	21.5	---	---	---	14.0	
15.	14.2	---	7.0	7.0	---	.3	19.5	---	---	---	10.0	
16.	14.0	13.7	16.0	10.0	---	.3	26.2	40.0	7	26.0	19.0	
17.	14.0	13.7	36.0	8.0	---	.2	19.5	20.0	4	11.0	155.0	
18.	14.1	---	30.0	20.0	---	.3	21.5	16.0	4	11.0	110.0	
19.	14.1	13.8	18.0	9.0	---	.3	36.2	40.5	8	11.6	8.0	
20.	14.1	11.4	15.0	25.0	---	.4	21.6	29.5	5	14.0	12.0	

TABLE IV.

Agropyron spicatum Study Area Cedar Mountain Date 19 August 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKE-LETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm	cm	cm	cm				
1.	14.5	---	14.0	7.0	---	.2	22.7	---	---	---	∞	
2.	14.4	---	3.0	7.0	---	.1	16.0	---	---	---	7.0	
3.	14.7	---	4.0	2.0	---	.3	16.5	---	---	---	12.0	
4.	14.4	---	28.0	21.0	---	.3	33.6	---	---	---	∞	
5.	14.6	12.4	22.0	20.0	---	.3	33.5	29.0	6	10	∞	
6.	14.7	13.5	41.0	23.0	---	.3	22.2	18.5	5	7	∞	
7.	14.5	---	23.0	18.0	---	.2	19.6	---	---	---	∞	
8.	14.6	---	10.0	4.0	---	.2	26.3	---	---	---	---	
9.	14.5	---	10.0	5.0	---	.3	28.0	---	---	---	---	
10.	14.8	---	8.0	4.0	---	.2	21.7	---	---	---	---	
11.	14.5	13.7	14.0	10.0	---	.2	19.4	16.5	4	2	---	
12.	14.7	12.5	7.0	1.5	---	.1	12.0	16.0	3	3	10.0	
13.	14.6	---	17.0	6.0	---	.2	12.0	---	---	---	32.0	
14.	14.7	---	4.0	3.0	---	.2	21.5	---	---	---	14.0	
15.	14.8	---	7.0	7.0	---	.3	19.5	---	---	---	10.0	
16.	14.6	12.6	16.0	10.0	---	.3	26.2	40.0	7	26.0	19.0	
17.	14.4	13.7	36.0	8.0	---	.2	19.5	20.0	4	11.0	155.0	
18.	14.6	12.4	30.0	20.0	---	.3	21.5	16.0	4	11.0	110.0	
19.	14.5	12.6	18.0	9.0	---	.3	36.2	40.5	8	11.6	8.0	
20.	14.8	12.8	15.0	25.0	---	.4	21.6	29.5	5	14.0	12.0	

TABLE IV.

Agropyron spicatum Study Area Cedar Mountain Date 6 November 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKELETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm	cm	cm	cm				
1.	17.0	---	14.0	7.0	---	.2	22.7	---	---	---	∞	
2.	17.0	---	3.0	7.0	---	.1	16.0	---	---	---	7.0	
3.	17.0	---	4.0	2.0	---	.3	16.5	---	---	---	12.0	
4.	17.0	---	28.0	21.0	---	.3	33.6	---	---	---	∞	
5.	17.0	17.0	22.0	20.0	---	.3	33.5	29.0	6	10	∞	
6.	17.0	17.0	41.0	23.0	---	.3	22.2	18.5	5	7	∞	
7.	17.0	---	23.0	18.0	---	.2	19.6	---	---	---	∞	
8.	17.0	---	10.0	4.0	---	.2	26.3	---	---	---	---	
9.	17.0	---	10.0	5.0	---	.3	28.0	---	---	---	---	
10.	17.0	---	8.0	4.0	---	.2	21.7	---	---	---	---	
11.	17.0	17.0	14.0	10.0	---	.3	19.4	16.5	4	2	---	
12.	17.0	17.0	7.0	1.5	---	.1	12.0	16.0	3	3	10.0	
13.	17.0	---	17.0	6.0	---	.2	12.0	---	---	---	32.0	
14.	17.0	---	4.0	3.0	---	.2	21.5	---	---	---	14.0	
15.	17.0	---	7.0	7.0	---	.3	19.5	---	---	---	10.0	
16.	17.0	17.0	16.0	10.0	---	.3	26.2	40.0	7	26.0	19.0	
17.	17.0	17.0	36.0	8.0	---	.2	19.5	20.0	4	11.0	155.0	
18.	17.0	17.0	30.0	20.0	---	.3	21.5	16.0	4	11.0	110.0	
19.	17.0	17.0	18.0	9.0	---	.3	36.2	40.5	8	11.6	8.0	
20.	17.0	17.0	15.0	25.0	---	.4	21.6	29.5	5	14.0	12.0	

TABLE IV.

Agropyron spicatum   Study Area Cumberland #3   Date 4 June 1976

PLANT NO.	PHENO. STAGE SCORE VEG	PHENO. STAGE SCORE REPR	CLUMP LGTH cm	CLUMP WIDTH cm	CLUMP DIAM cm	MAX LEAF WIDTH cm	MAX LEAF HGHT cm	MAX SPIKE HGHT cm	NOS SPIKE-LETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
1.	3.4	---	---	---	---	.2	29	---	---	---	16	
2.	3.7	---	---	---	---	.2	34	---	---	---	14	
3.	4.2	---	---	---	---	.2	37	---	---	---	8	
4.	3.0	---	---	---	---	.2	34	---	---	---	4	
5.	3.2	---	---	---	---	.2	35	---	---	---	7	
6.	2.4	---	---	---	---	.1	13	---	---	---	1	Replacement plant
7.	3.4	---	---	---	---	.2	35	---	---	---	8	
8.	4.5	---	---	---	---	.2	18	---	---	---	2	
9.	4.2	---	---	---	---	.2	30	---	---	---	6	
10.	3.4	---	---	---	---	.2	20	---	---	---	3	
11.	4.4	---	---	---	---	.2	33	---	---	---	140	
12.	3.2	---	---	---	---	.2	32	---	---	---	110	
13.	3.6	6.4	---	---	---	.2	27	32	6	4	45	
14.	2.7	---	---	---	---	.2	20	---	---	---	25	
15.	3.2	---	---	---	---	.2	28	---	---	---	12	
16.	3.2	---	---	---	---	.2	18	---	---	---	10	
17.	3.0	---	---	---	---	.2	34	---	---	---	21	
18.	4.2	---	---	---	---	.2	25	---	---	---	24	
19.	3.5	---	---	---	---	.2	23	---	---	---	11	
20.	3.7	---	---	---	---	.2	32	---	---	---	34	

TABLE IV.

Agropyron spicatum Study Area Cumberland #3 Date 15 July 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKE-LETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm	cm	cm	cm				
1.	14.2	---	---	---	---	.1	27.0	---	---	---	16	
2.	14.3	---	---	---	---	.1	29.0	---	---	---	14	
3.	14.0	---	---	---	---	.1	32.0	---	---	---	8	
4.	4.2	---	---	---	---	.1	37.0	---	---	---	4	
5.	14.2	---	---	---	---	.1	22.0	---	---	---	7	
6.	4.2	---	---	---	---	.1	32.0	---	---	---	1	
7.	14.0	---	---	---	---	.1	19.0	---	---	---	8	
8.	4.6	---	---	---	---	.1	28.0	---	---	---	2	
9.	14.4	---	---	---	---	.1	18.0	---	---	---	6	
10.	4.8	---	---	---	---	.1	21.0	---	---	---	3	
11.	4.8	---	---	---	---	.1	34.0	---	---	---	140	
12.	14.1	---	---	---	---	.1	33.0	---	---	---	110	
13.	14.2	6.4	---	---	---	.1	28.0	32	6	4	45	
14.	14.7	---	---	---	---	.1	27.0	---	---	---	25	
15.	14.4	---	---	---	---	.1	26.0	---	---	---	12	
16.	4.4	---	---	---	---	.1	15.0	---	---	---	10	
17.	14.3	---	---	---	---	.1	27.5	---	---	---	21	
18.	14.4	---	---	---	---	.1	25.0	---	---	---	24	
19.	14.1	---	---	---	---	.1	26.0	---	---	---	11	
20.	14.2	---	---	---	---	.1	33.5	---	---	---	34	

TABLE IV.

Agropyron spicatum   Study Area   Cumberland #3   Date   4 August 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKE-LETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm	cm	cm	cm				
1.	14.1	---	7.0	3.0	---	.1	27.4	---	---	---	26	
2.	14.3	---	7.5	2.0	17.0	.1	30.2	---	---	---	26	
3.	14.4	---	16.0	9.0	17.0	.2	37.0	---	---	---	Many	
4.	14.2	---	4.5	2.0	---	.2	35.2	---	---	---	6	
5.	14.4	---	2.5	.7	---	.2	29.0	---	---	---	3	
6.	14.4	---	2.0	.7	---	.2	21.5	---	---	---	5	
7.	14.5	---	9.0	4.0	28.0	.3	34.5	---	---	---	Many	
8.	14.5	---	1.0	.7	---	.3	26.2	---	---	---	3	
9.	14.3	---	10.0	5.0	---	.3	30.5	---	---	---	Many	
10.	14.4	---	4.0	1.5	---	.2	20.0	---	---	---	8	
11.	14.2	---	15.0	11.0	15.0	.2	32.5	---	---	---	Many	
12.	14.5	---	12.0	10.0	12.0	.2	32.5	---	---	---	Many	
13.	14.3	6.4	8.0	11.0	11.0	.2	28.2	32	6	4	Many	
14.	14.5	---	4.0	1.0	---	.3	21.5	---	---	---	12	
15.	14.2	---	5.0	2.0	---	.2	21.5	---	---	---	12	
16.	14.5	---	7.0	2.0	9.0	.1	13.0	---	---	---	24	
17.	14.4	---	2.0	.7	---	.1	25.4	---	---	---	4	
18.	14.4	---	2.5	.7	---	.2	34.6	---	---	---	5	
19.	14.3	---	7.0	3.0	---	.2	23.0	---	---	---	15	
20.	14.5	---	8.0	3.0	---	.3	29.0	---	---	---	23	

TABLE IV.

Agropyron spicatum Study Area Cumberland #3 Date 19 August 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKE-LETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm	cm	cm	cm				
1.	14.5	---	7.0	3.0	---	.1	27.4	---	---	---	26	
2.	14.6	---	7.5	2.0	17.0	.1	30.2	---	---	---	26	
3.	14.5	---	16.0	9.0	17.0	.2	37.0	---	---	---	Many	
4.	14.4	---	4.5	2.0	---	.2	35.2	---	---	---	6	
5.	14.7	---	2.5	.7	---	.2	29.0	---	---	---	3	
6.	14.4	---	2.0	.7	---	.2	21.5	---	---	---	5	
7.	14.5	---	9.0	4.0	28.0	.3	34.5	---	---	---	Many	
8.	14.6	---	1.0	.7	---	.3	26.2	---	---	---	3	
9.	14.7	---	10.0	5.0	---	.3	30.5	---	---	---	Many	
10.	14.8	---	4.0	1.5	---	.2	20.0	---	---	---	8	
11.	14.6	---	15.0	11.0	15.0	.2	32.5	---	---	---	Many	
12.	14.6	---	12.0	10.0	12.0	.2	32.5	---	---	---	Many	
13.	14.7	6.4	8.0	11.0	11.0	.2	28.2	32	6	4	Many	
14.	14.6	---	4.0	1.0	---	.3	21.5	---	---	---	12	
15.	14.5	---	5.0	2.0	---	.2	21.5	---	---	---	12	
16.	14.7	---	7.0	2.0	9.0	.1	13.0	---	---	---	24	
17.	14.3	---	2.0	.7	---	.1	25.4	---	---	---	4	
18.	14.5	---	2.5	.7	---	.2	34.6	---	---	---	5	
19.	14.4	---	7.0	3.0	---	.2	23.0	---	---	---	15	
20.	14.6	---	8.0	3.0	---	.3	29.0	---	---	---	23	

TABLE IV.

Agropyron spicatum Study Area Cumberland #3 Date 19 September 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKE-LETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm	cm	cm	cm				
1.	16.3	---	7.0	3.0	---	.1	27.4	---	---	---	26	
2.	16.1	---	7.5	2.0	17.0	.1	30.2	---	---	---	26	
3.	16.3	---	16.0	9.0	17.0	.2	37.0	---	---	---	Many	
4.	16.1	---	4.5	2.0	---	.2	35.2	---	---	---	6	
5.	14.9	---	2.5	.7	---	.2	29.0	---	---	---	3	
6.	16.2	---	2.0	.7	---	.2	21.5	---	---	---	5	
7.	14.9	---	9.0	4.0	28.0	.3	34.5	---	---	---	Many	
8.	14.9	---	1.0	.7	---	.3	26.2	---	---	---	3	
9.	16.2	---	10.0	5.0	---	.3	30.5	---	---	---	Many	
10.	14.9	---	4.0	1.5	---	.2	20.0	---	---	---	8	
11.	14.9	---	15.0	11.0	15.0	.2	32.5	---	---	---	Many	
12.	14.9	---	12.0	10.0	12.0	.2	32.5	---	---	---	Many	
13.	16.2	6.4	8.0	11.0	11.0	.2	28.2	32	6	4	Many	
14.	14.9	---	4.0	1.0	---	.3	21.5	---	---	---	12	
15.	16.3	---	5.0	2.0	---	.2	21.5	---	---	---	12	
16.	16.3	---	7.0	2.0	9.0	.1	13.0	---	---	---	24	
17.	16.2	---	2.0	.7	---	.1	25.4	---	---	---	4	
18.	14.9	---	2.5	.7	---	.2	31.6	---	---	---	5	
19.	16.1	---	7.0	3.0	---	.2	23.0	---	---	---	15	
20.	16.8	---	8.0	3.0	---	.3	29.0	---	---	---	23	

TABLE IV.

Agropyron spicatum Study Area Demer Date 2 June 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKE-LETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm	cm	cm	cm				
1.	4.5	6.0	---	---	---	.4	34.2	48.5	7	18	90	
2.	4.5	6.5	---	---	---	.4	30.0	40.3	12	95	200	
3.	4.5	6.2	---	---	---	.4	34.8	50.6	7	3	65	
4.	4.5	6.5	---	---	---	.3	48.5	59.9	8	61	---	
5.	4.5	6.5	---	---	---	.3	26.2	41.0	5	5	250	
6.	4.5	6.5	---	---	---	.3	27.5	44.0	7	7	85	
7.												
8.												
9.												
10.												
11.												
12.												
13.												
14.												
15.												
16.												
17.												
18.												
19.												
20.												

TABLE IV.

Agropyron spicatum   Study Area Demer   Date 6 July 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKELETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm	cm	cm	cm				
1.	4.4	13.4	---	---	---	.3	32.0	48.5	7	18	90	
2.	4.7	13.8	---	---	---	.3	33.5	41.5	12	95	200	
3.	4.5	13.2	---	---	---	.3	32.5	64.2	7	3	65	
4.	4.8	13.4	---	---	---	.3	43.8	63.5	10	61	---	
5.	4.4	13.2	---	---	---	.3	27.5	44.5	6	5	250	
6.	4.3	13.2	---	---	---	.3	26.5	48.0	7	7	85	
7.												
8.												
9.												
10.												
11.												
12.												
13.												
14.												
15.												
16.												
17.												
18.												
19.												
20.												

TABLE IV.

Agropyron spicatum Study Area Demer Date 28 July 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKELETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm	cm	cm	cm				
1.	14.2	15.7	15.0	9.0	---	.2	36.2	46.4	7	18	---	16% repr. culms
2.	14.2	15.4	36.0	21.0	---	.2	28.0	34.5	12	95	---	35% repr. culms
3.	14.6	15.6	9.0	5.0	---	.2	47.2	62.0	7	3	---	4% repr. culms
4.	14.5	15.6	30.0	20.0	---	.2	43.5	54.0	10	61	---	33% repr. culms
5.	14.3	15.4	18.0	14.0	---	.1	22.4	44.0	6	5	---	1% repr. culms
6.	14.4	15.5	10.0	4.0	---	.2	23.0	46.4	7	7	---	10-12% repr. culms
7.												
8.												
9.												
10.												
11.												
12.												
13.												
14.												
15.												
16.												
17.												
18.												
19.												
20.												

TABLE IV.

Agropyron spicatum　Study Area Demer　Date 18 August 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKE-LETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH	WIDTH	DIAM							
			cm	cm	cm	cm	cm	cm				
1.	14.1	13.9	15.0	9.0	---	.2	28.0	7.7	7	18	---	16% repr. culms
2.	14.3	15.4	36.0	21.0	---	.2	28.0	34.5	12	95	---	35% repr. culms
3.	14.1	15.2	9.0	5.0	---	.2	30.5	11.0	7	3	---	4% repr. culms
4.	14.2	15.5	30.0	20.0	---	.2	43.5	54.0	10	61	---	33% repr. culms
5.	14.2	15.3	18.0	14.0	---	.1	22.4	44.0	6	5	---	1% repr. culms
6.	14.2	15.3	10.0	4.0	---	.2	23.0	46.4	7	7	---	10% repr. culms
7.												
8.												
9.												
10.												
11.												
12.												
13.												
14.												
15.												
16.												
17.												
18.												
19.												
20.												

TABLE IV.

Agropyron spicatum Study Area Demer Date 30 October 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKE-LETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm	cm	cm	cm				
1.	14.9	15.9	15.0	9.0	---	.2	28.0	7.7	7	18	---	16% repr. culms
2.	14.9	15.9	36.0	21.0	---	.2	28.0	34.5	12	95	---	35% repr. culms
3.	14.9	15.9	9.0	5.0	---	.2	30.5	11.0	7	3	---	4% repr. culms
4.	14.9	15.9	30.0	20.0	---	.2	43.5	54.0	10	61	---	33% repr. culms
5.	14.9	15.9	18.0	14.0	---	.1	22.4	44.0	6	5	---	1% repr. culms
6.	14.9	15.9	10.0	4.0	---	.2	23.0	46.4	7	7	---	10% repr. culms
7.												
8.												
9.												
10.												
11.												
12.												
13.												
14.												
15.												
16.												
17.												
18.												
19.												
20.												

TABLE IV.

Agropyron spicatum   Study Area Horse Creek   Date 2 June 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKE-LETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm	cm	cm	cm				
1.	4.3	6.8	---	---	---	.3	17	41	6	2	54	
2.	4.3	6.2	---	---	---	.4	20	39	8	4	80	
3.	4.3	6.0	---	---	---	.3	29	30	4	1	30	
4.	4.3	---	---	---	---	.2	14	---	---	---	23	
5.	4.3	---	---	---	---	.2	17.2	---	---	---	2	
6.	4.2	---	---	---	---	.2	14.5	---	---	---	5	
7.	4.3	---	---	---	---	.3	25.7	---	---	---	11	
8.	4.3	---	---	---	---	.1	20.5	---	---	---	9	
9.	4.4	6.1	---	---	---	.2	24	43	6	3	10	
10.	4.2	---	---	---	---	.2	24.5	---	---	---	10	
11.	4.4	6.0	---	---	---	.3	13.1	21	6	1	1	
12.	4.3	---	---	---	---	.2	19.2	---	---	---	25	
13.	4.5	6.0	---	---	---	.2	29.5	40.5	7	8	24	
14.	4.4	6.0	---	---	---	.3	24.5	30.5	4	1	20	
15.	4.3	---	---	---	---	.2	14	---	---	---	20	
16.	4.2	---	---	---	---	.2	11	---	---	---	15	
17.	4.1	---	---	---	---	.2	12	---	---	---	11	
18.	4.1	---	---	---	---	.2	16.3	---	---	---	3	
19.	4.3	---	---	---	---	.2	16.0	---	---	---	8	
20.	3.1	---	---	---	---	.3	29.2	---	---	---	1	

TABLE IV.

Agropyron spicatum Study Area Horse Creek Date 2 July 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKE-LETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm	cm	cm	cm				
1.	4.4	11	---	---	---	.3	29.0	36.0	6	18	34	
2.	4.3	10	---	---	---	.3	20.0	36.0	7	2	36	
3.	4.4	10	---	---	---	.3	26.6	38.0	5	1	20	
4.	4.3	---	---	---	---	.2	11.5	---	---	---	1	
5.	4.3	---	---	---	---	.3	19.0	---	---	---	2	
6.	4.4	11	---	---	---	.2	14.5	35	6	3	3	
7.	4.4	---	---	---	---	.3	27	---	---	---	15	
8.	4.3	---	---	---	---	.3	23.2	---	---	---	11	
9.	4.5	10.8	---	---	---	.2	35.5	46	5	3	5	
10.	4.2	---	---	---	---	.2	21.5	---	---	---	6	
11.	4.1	11	---	---	---	.2	14.0	25.5	6	2	7	
12.	4.4	---	---	---	---	.3	21.4	---	---	---	6	
13.	4.8	11	---	---	---	.3	30.5	33.5	4	2	2	
14.	4.5	10.8	---	---	---	.2	31.4	37	4	1	9	
15.	4.4	---	---	---	---	.3	14.5	---	---	---	3	
16.	4.3	---	---	---	---	.3	13.0	---	---	---	6	
17.	4.7	---	---	---	---	.2	13.0	---	---	---	9	
18.	4.8	---	---	---	---	.3	21.0	---	---	---	3	
19.	4.5	---	---	---	---	.3	15.5	---	---	---	3	
20.	4.4	---	---	---	---	.3	30.5	---	---	---	1	

TABLE IV.

Agropyron spicatum Study Area Horse Creek Date 29 July 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKE-LETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm	cm	cm	cm				
1.	14.5	15.8	16	12	---	.2	34.8	45.5	6	36	---	50% repr. culms
2.	14.5	15.5	10	10	---	.2	33.5	41.5	7	4	---	5% repr. culms
3.	14.5	15.5	13	9	---	.1	32.0	36.5	5	1	---	1% repr. culms
4.	14.6	---	4	2	---	.1	11.2	---	---	---	13	
5.	14.5	15.5	17	12	---	.1	32.4	46.5	5	7	---	7% repr. culms
6.	14.5	15.5	17	2	---	.1	26.0	42.0	7	23	---	15% repr. culms
7.	14.5	---	4	1	---	.2	26.5	---	---	---	6	
8.	14.7	15.8	16	12	---	.2	25.2	47.5	5	14	---	5% repr. culms
9.	14.7	15.8	7	4	---	.2	26.0	40.0	5	8	---	30% repr. culms
10.	14.6	15.5	20	11	---	.2	26.0	42.0	6	1	---	1% repr. culms
11.	14.8	15.5	2.5	.5	---	.2	14.0	24.5	6	1	2	
12.	14.7	---	28	16	---	.2	21.0	---	---	---	---	
13.	14.2	15.5	7	2	---	.2	22.0	40.1	7	2	14	
14.	14.5	15.4	16	5	---	.2	25.0	36.0	5	3	---	4% repr. culms
15.	14.6	---	10	7	---	.2	14.0	---	---	---	55	
16.	14.3	---	6	3	---	.2	11.0	---	---	---	32	
17.	14.5	---	2	2	---	.2	12.0	---	---	---	13	
18.	14.3	---	2	.4	---	.2	21.0	---	---	---	3	
19.	14.5	---	2.8	1	---	.2	20.0	---	---	---	8	
20.	14.4	---	1	.5	---	.2	28.4	---	---	---	3	

TABLE IV.

Agropyron spicatum Study Area Horse Creek Date 18 August 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKE-LETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm	cm	cm	cm				
1.	14.4	15.9	16	12	---	.2	34.8	45.5	6	36	---	50% repr. culms
2.	14.3	15.9	10	10	---	.2	33.5	41.5	7	4	---	5% repr. culms
3.	14.6	15.9	13	9	---	.1	32.0	36.5	5	1	---	1% repr. culms
4.	14.7	---	4	2	---	.1	13.0	---	---	---	13	
5.	14.5	---	17	12	---	.1	17.5	46.5	5	7	---	7% repr. culms
6.	14.6	15.8	17	2	---	.1	26.0	42.0	7	23	---	15% repr. culms
7.	14.6	---	4	1	---	.2	26.5	---	---	---	6	
8.	14.7	15.9	16	12	---	.2	25.2	47.5	5	14	---	5% repr. culms
9.	14.8	15.9	7	4	---	.2	26.0	40.0	5	8	---	30% repr. culms
10.	14.5	15.9	20	11	---	.2	26.0	42.0	6	1	---	1% repr. culms
11.	14.8	15.9	2.5	.5	---	.2	14.0	24.5	6	1	2	
12.	14.8	---	28	16	---	.2	21.0	---	---	---	---	
13.	14.6	15.9	7	2	---	.2	22.0	40.1	7	2	14	
14.	14.6	15.8	16	5	---	.2	25.0	36.0	5	3	---	4% repr. culms
15.	14.7	---	10	7	---	.2	14.0	---	---	---	55	
16.	14.6	---	6	3	---	.2	11.0	---	---	---	32	
17.	14.7	---	2	2	---	.2	12.0	---	---	---	13	
18.	14.7	---	2	.4	---	.2	21.0	---	---	---	3	
19.	14.8	---	2.8	1	---	.2	20.0	---	---	---	8	
20.	14.7	15.9	1	.5	---	.2	28.4	---	---	---	3	

TABLE IV.

Agropyron spicatum Study Area Horse Creek Date 9 September 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKE-LETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm	cm	cm	cm				
1.	14.5	15.9	16	12	---	.2	34.8	45.5	6	36	---	50% repr. culms
2.	14.5	15.9	10	10	---	.2	33.5	41.5	7	4	---	5% repr. culms
3.	14.5	15.9	13	9	---	.1	32.0	36.5	5	1	---	1% repr. culms
4.	14.5	15.9	4	2	---	.1	13.0	---	---	---	13	
5.	14.5	15.9	17	12	---	.1	17.5	46.5	5	7	---	7% repr. culms
6.	14.5	15.9	17	2	---	.1	26.0	42.0	7	23	---	15% repr. culms
7.	14.5	15.9	4	1	---	.2	26.5	---	---	---	6	
8.	14.5	15.9	16	12	---	.2	25.2	47.5	5	14	---	5% repr. culms
9.	14.5	15.9	7	4	---	.2	26.0	40.0	5	8	---	30% repr. culms
10.	14.5	15.9	20	11	---	.2	26.0	42.0	6	1	---	1% repr. culms
11.	14.5	15.9	2.5	.5	---	.2	14.0	24.5	6	1	2	
12.	14.5	15.9	28	16	---	.2	21.0	---	---	---	---	
13.	14.5	15.9	7	2	---	.2	22.0	40.1	7	2	14	
14.	14.5	15.9	16	5	---	.2	25.0	36.0	5	3	---	4% repr. culms
15.	14.5	15.9	10	7	---	.2	14.0	---	---	---	55	
16.	14.5	15.9	6	3	---	.2	11.0	---	---	---	32	
17.	14.5	15.9	2	2	---	.2	12.0	---	---	---	13	
18.	14.5	15.9	2	.4	---	.2	21.0	---	---	---	3	
19.	14.5	15.9	2.8	1	---	.2	20.0	---	---	---	8	
20.	14.5	15.9	1	.5	---	.2	28.4	---	---	---	3	

TABLE IV.

Agropyron spicatum Study Area Horse Creek Date 31 October 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKE-LETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm	cm	cm	cm				
1.	17.0	17.0	16	12	---	.2	34.8	45.5	6	36	---	50% repr. culms
2.	17.0	17.0	10	10	---	.2	33.5	41.5	7	4	---	5% repr. culms
3.	17.0	17.0	13	9	---	.1	32.0	36.5	5	1	---	1% repr. culms
4.	17.0	17.0	4	2	---	.1	13.0	---	---	---	13	
5.	17.0	17.0	17	12	---	.1	17.5	46.5	5	7	---	7% repr. culms
6.	17.0	17.0	17	2	---	.1	26.0	42.0	7	23	---	15% repr. culms
7.	17.0	17.0	4	1	---	.2	26.5	---	---	---	6	
8.	17.0	17.0	16	12	---	.2	25.2	47.5	5	14	---	5% repr. culms
9.	17.0	17.0	7	4	---	.2	26.0	40.0	5	8	---	30% repr. culms
10.	17.0	17.0	20	11	---	.2	26.0	42.0	6	1	---	1% repr. culms
11.	17.0	17.0	2.5	.5	---	.2	14.0	24.5	6	1	2	
12.	17.0	17.0	28	16	---	.2	21.0	---	---	---	---	
13.	17.0	17.0	7	2	---	.2	22.0	40.1	7	2	14	
14.	17.0	17.0	16	5	---	.2	25.0	36.0	5	3	---	4% repr. culms
15.	17.0	17.0	10	7	---	.2	14.0	---	---	---	55	
16.	17.0	17.0	6	3	---	.2	11.0	---	---	---	32	
17.	17.0	17.0	2	2	---	.2	12.0	---	---	---	13	
18.	17.0	17.0	2	.4	---	.2	21.0	---	---	---	3	
19.	17.0	17.0	2.8	1	---	.2	20.0	---	---	---	8	
20.	17.0	17.0	1	.5	---	.2	28.4	---	---	---	3	

TABLE IV.

Agropyron spicatum Study Area Owl Draw Date 1 June 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKE-LETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm	cm	cm	cm				
1.	4.5	---	---	---	---	.4	15.6	---	---	---	4	
2.	4.4	---	---	---	---	.3	14.6	---	---	---	3	
3.	4.2	---	---	---	---	,2	16.5	---	---	---	2	
4.	3.2	---	---	---	---	.1	4.5	---	---	---	1	
5.	4.3	---	---	---	---	.2	17.0	---	---	---	6	
6.	3.0	---	---	---	---	.1	8.0	---	---	---	1	
7.	4.4	---	---	---	---	.3	22.1	---	---	---	5	
8.	3.0	---	---	---	---	.1	8.9	---	---	---	2	
9.	4.5	---	---	---	---	.2	19.0	---	---	---	2	
10.	3.1	---	---	---	---	.2	16.0	---	---	---	3	
11.	4.5	---	---	---	---	.2	15.5	---	---	---	2	
12.	4.6	---	---	---	---	.2	12.0	---	---	---	2	
13.	4.4	---	---	---	---	.2	13.5	---	---	---	3	
14.	4.3	---	---	---	---	.2	16.2	---	---	---	3	
15.	4.4	---	---	---	---	.2	10.0	---	---	---	3	
16.	4.4	---	---	---	---	.2	11.2	---	---	---	4	
17.	2.8	---	---	---	---	.1	7.0	---	---	---	3	
18.	4.4	---	---	---	---	.3	13.0	---	---	---	5	
19.	4.4	---	---	---	---	.3	18.2	---	---	---	7	
20.	4.4	---	---	---	---	.3	14.0	---	---	---	9	

TABLE IV.

Agropyron spicatum Study Area Owl Draw Date 12 July 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKE-LETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm	cm	cm	cm				
1.	4.2	---	---	---	---	.3	9.5	---	---	---	4	
2.	3.6	---	---	---	---	.2	10.4	---	---	---	3	
3.	3.5	---	---	---	---	.2	19.4	---	---	---	2	
4.	3.4	---	---	---	---	.2	10.0	---	---	---	1	
5.	5.1	---	---	---	---	.3	18.5	---	---	---	6	
6.	2.8	---	---	---	---	.1	7.0	---	---	---	1	
7.	4.8	---	---	---	---	.2	23.5	---	---	---	5	
8.	3.2	---	---	---	---	.2	17.3	---	---	---	2	
9.	3.0	---	---	---	---	.2	20.3				2	
10.	3.7	---	---	---	---	.2	17.2	---	---	---	3	
11.	3.8	---	---	---	---	.3	21.0	---	---	---	2	
12.	5.2	---	---	---	---	.3	19.5	---	---	---	2	
13.	3.5	---	---	---	---	.2	14.8	---	---	---	3	
14.	5.3	---	---	---	---	.3	19.1	---	---	---	3	
15.	5.2	---	---	---	---	.1	7.5	---	---	---	3	
16.	3.4	---	---	---	---	.1	10.5	---	---	---	4	
17.	2.4	---	---	---	---	.1	8.5	---	---	---	3	
18.	5.2	---	---	---	---	.3	13.5	---	---	---	5	
19.	5.2	---	---	---	---	.2	19.5	---	---	---	7	
20.	5.1	---	---	---	---	.2	12.8	---	---	---	9	

TABLE IV.

Agropyron spicatum Study Area Owl Draw Date 26 July 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKE-LETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm	cm	cm	cm				
1.	14.2	---	5.0	2.0	---	.3	19.0	---	---	---	4	
2.	14.2	---	3.0	1.0	---	.3	14.8	---	---	---	6	
3.	14.3	---	1.0	.5	---	.1	17.2	---	---	---	2	
4.	14.1	---	.5	.5	---	.1	14.2	---	---	---	2	
5.	14.1	---	5.0	4.0	---	.3	18.2	---	---	---	20	
6.	14.3	---	1.5	.5	---	.2	17.5	---	---	---	3	
7.	14.3	---	5.0	3.0	---	.2	29.0	---	---	---	7	
8.	14.3	---	1.5	.5	---	.1	16.5	---	---	---	3	
9.	14.2	---	---	---	---	.2	20.1	---	---	---	1	
10.	14.3	---	1.0	.5	---	.2	19.6	---	---	---	3	
11.	14.3	---	---	---	14.0	.2	23.8	---	---	---	35	Dense
12.	14.2	---	3.0	2.0	15.0	.2	16.5	---	---	---	6	Dense
13.	14.2	---	2.0	.5	---	.2	14.8	---	---	---	3	
14.	14.1	---	3.0	2.5	10.0	.3	15.5	---	---	---	11	Dense
15.	14.1	---	---	---	---	.1	7.2	---	---	---	1	
16.	14.4	---	1.5	.5	19.0	.2	14.2	---	---	---	6	Dense
17.	14.8	---	1.5	.5	---	.1	8.4	---	---	---	3	Dying
18.	14.2	---	1.0	.5	---	.3	13.5	---	---	---	5	
19.	14.0	---	1.5	.5	---	.2	17.5	---	---	---	5	
20.	14.1	15.3	2.5	1.0	9.5	.2	15.0	33.5	8	1	3	Dense

TABLE IV.

Agropyron spicatum Study Area Owl Draw Date 21 August 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKE-LETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm	cm	cm	cm				
1.	14.4	---	5.0	2.0	---	.3	19.0	---	---	---	4	
2.	4.2	---	3.0	1.0	---	.3	14.8	---	---	---	6	
3.	14.4	---	1.0	.5	---	.1	17.2	---	---	---	2	
4.	14.6	---	.5	.5	---	.1	14.2	---	---	---	2	
5.	14.3	---	5.0	4.0	---	.3	18.2	---	---	---	20	
6.	14.8	---	1.5	.5	---	.2	17.5	---	---	---	3	
7.	14.3	---	5.0	3.0	---	.2	29.0	---	---	---	7	
8.	14.4	---	1.5	.5	---	.1	16.5	---	---	---	3	
9.	14.3	---	---	---	---	.2	20.1	---	---	---	1	
10.	14.7	---	1.0	.5	---	.2	19.6	---	---	---	3	
11.	14.6	---	---	---	14.0	.2	23.8	---	---	---	35	Dense
12.	14.8	---	3.0	2.0	15.0	.2	16.5	---	---	---	6	Dense
13.	14.5	---	2.0	.5	---	.2	14.8	---	---	---	3	
14.	14.4	---	3.0	2.5	10.0	.3	15.5	---	---	---	11	Dense
15.	14.5	---	---	---	---	.1	7.2	---	---	---	1	
16.	15.5	---	1.5	.5	19.0	.2	14.2	---	---	---	6	Dense
17.	14.4	---	1.5	.5	---	.1	8.4	---	---	---	3	Dying
18.	14.4	---	1.0	.5	---	.3	13.5	---	---	---	5	
19.	14.5	---	1.5	.5	---	.2	17.5	---	---	---	5	
20.	14.5	15.3	2.5	1.0	9.5	.2	15.0	33.5	8	1	3	Dense

TABLE IV.

Agropyron spicatum Study Area Owl Draw Date 29 October 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH cm	MAX LEAF HGHT cm	MAX SPIKE HGHT cm	NOS SPIKE-LETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm							
1.	17.0	---	5.0	2.0	---	.3	19.0	---	---	---	4	
2.	17.0	---	3.0	1.0	---	.3	14.8	---	---	---	6	
3.	17.0	---	1.0	.5	---	.1	17.2	---	---	---	2	
4.	17.0	---	.5	.5	---	.1	14.2	---	---	---	2	
5.	17.0	---	5.0	4.0	---	.3	18.2	---	---	---	20	
6.	17.0	---	1.5	.5	---	.2	17.5	---	---	---	3	
7.	17.0	---	5.0	3.0	---	.2	29.0	---	---	---	7	
8.	17.0	---	1.5	.5	---	.1	16.5	---	---	---	3	
9.	17.0	---	---	---	---	.2	20.1	---	---	---	1	
10.	17.0	---	1.0	.5	---	.2	19.6	---	---	---	3	
11.	17.0	---	---	---	14.0	.2	23.8	---	---	---	35	Dense
12.	17.0	---	3.0	2.0	15.0	.2	16.5	---	---	---	6	Dense
13.	17.0	---	2.0	.5	---	.2	14.8	---	---	---	3	
14.	17.0	---	3.0	2.5	10.0	.3	15.5	---	---	---	11	Dense
15.	17.0	---	---	---	---	.1	7.2	---	---	---	1	
16.	17.0	---	1.5	.5	19.0	.2	14.2	---	---	---	6	Dense
17.	17.0	---	1.5	.5	---	.1	8.4	---	---	---	3	Dying
18.	17.0	---	1.0	.5	---	.3	13.5	---	---	---	5	
19.	17.0	---	1.5	.5	---	.2	17.5	---	---	---	5	
20.	17.0	17.0	2.5	1.0	9.5	.2	15.0	33.5	8	1	3	Dense

TABLE IV.

Agropyron spicatum Study Area Red Wash #2 Date 4 June 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKELETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm	cm	cm	cm				
1.	3.8	---	---	---	---	.2	23.7	---	---	---	3	
2.	4.2	---	---	---	---	.3	25.4	---	---	---	75	
3.	4.1	---	---	---	---	.2	16.5	---	---	---	12	
4.	4.1	---	---	---	---	.2	12.6	---	---	---	2	
5.	4.2	---	---	---	---	.4	34.0	---	---	---	Many	
6.	4.2	---	---	---	---	.3	22.2	---	---	---	14	
7.	4.1	---	---	---	---	.2	26.0	---	---	---	13	
8.	4.3	---	---	---	---	.2	23.1	---	---	---	3	
9.	4.2	---	---	---	---	.4	37.2	---	---	---	Many	
10.	4.2	---	---	---	---	.2	13.1	---	---	---	6	
11.	4.1	---	---	---	---	.2	13.0	---	---	---	7	
12.	4.2	---	---	---	---	.4	31.1	---	---	---	100	
13.	3.6	---	---	---	---	.1	13.0	---	---	---	10	
14.	4.2	---	---	---	---	.4	33.0	---	---	---	Many	
15.	4.5	---	---	---	---	.3	18.1	---	---	---	16	
16.	4.5	---	---	---	---	.3	18.0	---	---	---	4	
17.	4.3	---	---	---	---	.4	30.1	---	---	---	150	
18.	4.1	---	---	---	---	.3	24.7	---	---	---	Many	
19.	4.2	---	---	---	---	.2	18.3	---	---	---	15	
20.	3.3	---	---	---	---	.1	16.6	---	---	---	2	

TABLE IV.

Agropyron spicatum   Study Area Red Wash #2   Date 15 July 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKE-LETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm	cm	cm	cm				
1.	4.4	---	---	---	---	.2	15.5	---	---	---	3	
2.	4.4	---	---	---	---	.3	22.5	---	---	---	75	
3.	4.4	---	---	---	---	.2	16.1	---	---	---	12	
4.	4.8	---	---	---	---	.2	12.5	---	---	---	2	
5.	14.2	11.2	---	---	---	.4	29.0	49.0	5	6	20	
6.	4.2	---	---	---	---	.3	20.0	---	---	---	14	
7.	4.6	---	---	---	---	.2	18.0	---	---	---	13	
8.	14.5	---	---	---	---	.2	33.0	---	---	---	3	
9.	4.8	11.8	---	---	---	.4	20.5	32	6	6	15	
10.	4.8	---	---	---	---	.2	12.5	---	---	---	6	
11.	14.2	---	---	---	---	.2	19.5	---	---	---	7	
12.	14.0	---	---	---	---	.4	33.0	---	---	---	100	
13.	14.0	---	---	---	---	.1	20.0	---	---	---	10	
14.	4.0	---	---	---	---	.4	24.0	---	---	---	Many	
15.	14.4	---	---	---	---	.3	22.0	---	---	---	16	
16.	4.5	---	---	---	---	.3	19.0	---	---	---	4	
17.	4.8	11.4	---	---	---	.4	28.0	38.5	7	12	150	
18.	4.4	---	---	---	---	.3	17.5	---	---	---	Many	
19.	14.2	---	---	---	---	.2	21.0	---	---	---	15	
20.	4.4	---	---	---	---	.1	18.5	---	---	---	2	

TABLE IV.

Agropyron spicatum Study Area Red Wash #2 Date 6 August 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKELETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm	cm	cm	cm				
1.	14.3	15.0	31.0	25.0	---	.2	26.0	43.0	6	23.0	3	
2.	14.2	13.8	13.0	8.0	---	.3	25.4	23.0	4	6.0	75	
3.	14.2	---	13.0	10.0	73.0	.3	30.0	---	---	---	12	
4.	14.2	15.0	18.0	16.0	---	.3	25.0	46.5	6	14.0	2	
5.	14.3	13.7	36.0	32.0	---	.3	33.4	44.4	6	47.0	20	
6.	14.2	12.0	6.0	4.0	---	.1	20.0	14.0	3	1.0	14	
7.	14.2	---	4.5	2.0	---	.2	8.0	---	---	---	13	
8.	14.3	---	16.0	11.0	---	.2	29.2	---	---	---	3	
9.	14.2	15.1	4.0	17.0	---	.3	25.0	39.5	6	46.0	15	
10.	4.7	---	8.0	2.5	---	.2	12.0	---	---	---	18	
11.	14.3	---	7.0	4.0	---	.1	19.0	---	---	---	20	
12.	14.4	15.2	23.0	11.0	---	.3	21.5	29.0	6	2.0	100	
13.	14.2	15.0	52.0	42.0	---	.2	39.0	42.0	7	75.0	10	
14.	14.1	15.0	60.0	30.0	---	.3	29.5	42.0	6	29.0	Many	
15.	14.1	000	4.0	2.0	---	.2	21.0	---	---	---	16	
16.	14.2	---	.2	.5	---	.3	29.0	---	---	---	5	
17.	14.1	15.0	16.0	18.0	---	.2	26.0	36.0	8	40.0	150	
18.	14.1	---	10.0	5.0	---	.3	13.0	---	---	---	Many	
19.	14.1	15.0	21.0	6.0	---	.2	34.0	40.0	7	7.0	15	
20.	14.8	---	1.0	.5	---	.1	22.3	---	---	---	3	Dying

TABLE IV.

Agropyron spicatum   Study Area Red Wash #2   Date 19 August 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKE-LETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm	cm	cm	cm				
1.	14.6	12.2	31.0	25.0	---	.2	26.0	43.0	6	23.0	3	
2.	14.7	12.5	13.0	8.0	---	.3	25.4	23.0	4	6.0	75	
3.	14.5	---	13.0	10.0	73.0	.3	30.0	---	---	---	12	
4.	14.7	15.0	18.0	16.0	---	.3	25.0	46.5	6	14.0	2	
5.	14.5	11.5	36.0	32.0	---	.3	33.4	44.4	6	47.0	20	
6.	14.4	12.0	6.0	4.0	---	.1	20.0	14.0	3	1.0	14	
7.	14.6	---	4.5	2.0	---	.2	8.0	---	---	---	13	
8.	14.5	---	16.0	11.0	---	.2	29.2	---	---	---	3	
9.	14.4	11.8	4.0	17.0	---	.3	25.0	39.5	6	46.0	15	
10.	14.6	11.9	8.0	2.5	---	.2	12.0	---	---	---	18	
11.	14.5	---	7.0	4.0	---	.1	19.0	---	---	---	20	
12.	14.4	11.5	23.0	11.0	---	.3	21.5	29.0	6	2.0	100	
13.	14.6	12.0	52.0	42.0	---	.2	39.0	42.0	7	75.0	10	
14.	14.5	12.2	60.0	30.0	---	.3	29.5	42.0	6	29.0	Many	
15.	14.6	12.0	4.0	2.0	---	.2	21.0	---	---	---	16	
16.	14.4	12.0	.2	.5	---	.3	29.0	---	---	---	5	
17.	14.6	15.0	16.0	18.0	---	.2	26.0	36.0	8	40.0	150	
18.	14.7	---	10.0	5.0	---	.3	13.0	---	---	---	Many	
19.	14.5	11.7	21.0	6.0	---	.2	34.0	40.0	7	7.0	15	
20.	14.8	---	1.0	.5	---	.1	22.3	---	---	---	3	

TABLE IV.

Agropyron spicatum

Study Area Red Wash #2

Date 17 September 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKE-LETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH	WIDTH	DIAM							
			cm	cm	cm	cm	cm	cm				
1.	14.9	15.9	31.0	25.0	---	.2	26.0	43.0	6	23	3	
2.	16.3	15.9	13.0	8.0	---	.3	25.4	23.0	4	6	75	
3.	16.5	15.9	13.0	10.0	73.0	.3	30.0	---	---	---	12	
4.	16.1	15.9	18.0	16.0	---	.3	25.0	46.5	6	14.0	2	
5.	16.3	15.9	36.0	32.0	---	.3	33.4	44.4	6	47.0	20	
6.	16.7	15.9	6.0	4.0	---	.1	20.0	14.0	3	1.0	14	
7.	16.2	15.9	4.5	2.0	---	.2	8.0	---	---	---	13	
8.	16.3	15.9	16.0	11.0	---	.2	29.2	---	---	---	3	
9.	16.4	15.9	4.0	17.0	---	.3	25.0	39.5	6	46.0	15	
10.	16.6	15.9	8.0	2.5	---	.2	12.0	---	---	---	18	
11.	14.9	15.9	7.0	4.0	---	.1	19.0	---	---	---	20	
12.	14.9	15.9	23.0	11.0	---	.3	21.5	29.0	6	2.0	100	
13.	16.5	15.9	52.0	42.0	---	.2	39.0	42.0	7	75.0	10	
14.	16.0	15.9	60.0	30.0	---	.3	29.5	42.0	6	29.0	Many	
15.	16.0	15.9	4.0	2.0	---	.2	21.0	---	---	---	16	
16.	16.7	15.9	.2	.5	---	.3	29.0	---	---	---	5	
17.	16.2	15.9	16.0	18.0	---	.2	26.0	36.0	8	40.0	150	
18.	16.5	15.9	10.0	5.0	---	.3	13.0	---	---	---	Many	
19.	14.0	15.9	21.0	6.0	---	.2	34.0	40.0	7	7.0	15	
20.	14.9	15.9	1.0	.5	---	.1	22.3	---	---	---	3	

TABLE IV.

Agropyron spicatum Study Area Red Wash #2 Date 6 November 1976

PLANT NO.	PHENO. STAGE SCORE		CLUMP			MAX LEAF WIDTH	MAX LEAF HGHT	MAX SPIKE HGHT	NOS SPIKE-LETS/ CULM	NOS REPR CULMS	NOS VEG CULMS	MATURITY
	VEG	REPR	LGTH cm	WIDTH cm	DIAM cm	cm	cm	cm				
1.	17.0	17.0	31.0	25.0	---	.2	26.0	43.0	6	23	3	
2.	17.0	17.0	13.0	8.0	---	.3	25.4	23.0	4	6	75	
3.	17.0	17.0	13.0	10.0	73.0	.3	30.0	---	---	---	12	
4.	17.0	17.0	18.0	16.0	---	.3	25.0	46.5	6	14.0	2	
5.	17.0	17.0	36.0	32.0	---	.3	33.4	44.4	6	49.0	20	
6.	17.0	17.0	6.0	4.0	---	.1	20.0	14.0	3	1.0	14	
7.	17.0	17.0	4.5	2.0	---	.2	8.0	---	---	---	13	
8.	17.0	17.0	16.0	11.0	---	.2	29.2	---	---	---	3	
9.	17.0	17.0	4.0	17.0	---	.3	25.0	39.5	6	46.0	15	
10.	17.0	17.0	8.0	2.5	---	.2	12.0	---	---	---	18	
11.	17.0	17.0	7.0	4.0	---	.1	19.0	---	---	---	20	
12.	17.0	17.0	23.0	11.0	---	.3	21.5	29.0	6	2.0	100	
13.	17.0	17.0	52.0	42.0	---	.2	39.0	42.0	7	75.0	10	
14.	17.0	17.0	60.0	30.0	---	.3	29.5	42.0	6	29.0	Many	
15.	17.0	17.0	4.0	2.0	---	.2	21.0	---	---	---	16	
16.	17.0	17.0	.2	.5	---	.3	29.0	---	---	---	5	
17.	17.0	17.0	16.0	18.0	---	.2	26.0	36.0	8	40.0	150	
18.	17.0	17.0	10.0	5.0	---	.3	13.0	---	---	---	Many	
19.	17.0	17.0	21.0	6.0	---	.2	34.0	40.0	7	7.0	15	
20.	17.0	17.0	1.0	.5	---	.1	22.3	---	---	---	3	

TABLE IV.

Artemisia nova Study Area Horse Creek Date 2 June 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	2.4	---	30.2	---	---	---	---	20	---	---
2.	------	------	--------	--------	Died	--------	--------	--------	--------	-------
3.	2.6	---	19.2	---	---	---	---	10	---	---
4.	2.4	---	28.0	---	---	---	---	5	---	---
5.	2.8	---	23.0	---	---	---	---	10	---	---
6.	2.6	---	30.0	---	---	---	---	5	---	---
7.	2.6	---	30.0	---	---	---	---	45	---	---
8.	2.2	---	9.0	---	---	---	---	5	---	---
9.	2.4	---	20.0	---	---	---	---	30	---	---
10.	2.0	---	14.0	---	---	---	---	98	---	---
11.	2.0	---	59.0	---	---	---	---	5	---	---
12.	2.6	---	22.0	---	---	---	---	25	---	---
13.	2.8	---	46.5	---	---	---	---	45	---	---
14.	2.1	---	8.5	---	---	---	---	60	---	---
15.	2.0	---	20.0	---	---	---	---	60	---	---
16.	2.0	---	33.0	---	---	---	---	10	---	---
17.	2.2	---	16.0	---	---	---	---	60	---	---
18.	2.8	---	23.0	---	---	---	---	15	---	---
19.	2.6	---	31.0	---	---	---	---	10	---	---
20.	2.0	---	7.0	---	---	---	---	0	---	---

TABLE IV.

Artemisia nova Study Area Horse Creek Date 2 July 1976

PLANT NO.	PHENO. STAGE SCORE VEG.	REPR.	PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
1.	2.9	5.2	30.2	---	---	---	---	20	---	9.4
2.	2.9	---	10.5	---	New Plant		---	---	---	---
3.	3.0	5.3	19.2	---	---	---	---	10	---	14.6
4.	2.9	5.3	28.0	---	---	---	---	5	---	12.8
5.	3.0	5.3	23.0	---	---	---	---	10	---	11.9
6.	3.0	5.4	30.0	---	---	---	---	5	---	12.5
7.	3.1	5.4	46.0	---	---	---	---	45	---	18.5
8.	2.9	5.0	9.0	---	---	---	---	5	---	2.5
9.	3.1	5.2	20.0	---	---	---	---	30	---	13.0
10.	2.6	5.3	14.0	---	---	---	---	98	---	12.0
11.	3.1	5.4	59.0	---	---	---	---	5	---	19.7
12.	2.9	5.3	22.0	---	---	---	---	25	---	11.8
13.	3.2	5.3	46.5	---	---	---	---	45	---	13.8
14.	3.2	5.4	8.5	---	---	---	---	60	---	21.0
15.	3.0	5.3	20.0	---	---	---	---	60	---	14.0
16.	2.9	5.4	33.0	---	---	---	---	10	---	14.5
17.	3.0	5.3	16.0	---	---	---	---	60	---	8.0
18.	3.0	5.3	23.0	---	---	---	---	15	---	10.8
19.	3.2	5.4	31.0	---	---	---	---	10	---	15.0
20.	3.1	---	7.0	---	---	---	---	0	---	---

TABLE IV.

Artemisia nova Study Area Horse Creek Date 29 July 1976

PLANT NO.	PHENO. STAGE SCORE VEG.	PHENO. STAGE SCORE REPR.	PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
1.	3.4	6.0	30.2	---	---	25.0	4	20	---	17.0
2.	3.4	---	10.5	---	---	---	5	---	---	---
3.	3.4	5.5	19.2	---	---	17.5	4	10	---	12.0
4.	3.5	6.5	28.0	---	---	24.0	4	5	---	15.5
5.	3.2	5.0	23.0	---	---	27.5	4	10	---	12.0
6.	3.4	5.5	30.0	---	---	23.0	4	5	---	14.0
7.	3.6	5.5	40.0	---	---	11.0	4	45	---	12.5
8.	3.4	4.4	9.0	---	---	23.5	4	5	---	12.5
9.	3.4	5.5	20.0	---	---	31.0	4	30	---	12.5
10.	3.5	5.5	14.0	---	---	6.0	4	98	---	12.0
11.	3.8	6.2	59.0	---	---	65.0	4	5	---	20.0
12.	3.3	6.5	22.0	---	---	27.0	4	25	---	14.5
13.	3.8	6.5	46.5	---	---	39.0	4	45	---	16.0
14.	3.6	---	8.5	---	---	10.0	4	60	---	---
15.	3.6	5.5	20.0	---	---	17.0	4	60	---	16.0
16.	3.6	5.8	33.0	---	---	38.9	4	10	---	17.5
17.	3.4	5.8	16.0	---	---	9.0	4	10	---	18.5
18.	3.8	6.5	23.0	---	---	31.5	4	15	---	18.0
19.	3.4	6.5	31.0	---	---	31.0	4	10	---	17.0
20.	3.2	---	7.0	---	---	7.0	4	0	---	---

TABLE IV.

Artemisia nova   Study Area Horse Creek   Date 18 August 1976

PLANT NO.	PHENO. STAGE SCORE VEG.	REPR.	PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
1.	3.4	6.6	27.5	---	---	25.0	4	20	---	9.6
2.	3.5	---	11.5	---	---	---	5	---	---	---
3.	3.6	6.6	14.0	---	---	17.5	4	10	--	14.1
4.	3.7	6.4	27.5	---	---	24.0	4	5	---	11.5
5.	3.6	6.7	18.0	---	---	27.5	4	10	---	8.7
6.	3.7	6.8	21.0	---	---	23.0	4	5	---	13.0
7.	3.7	6.7	28.0	---	---	11.0	4	45	---	19.2
8.	3.8	---	9.0	---	---	23.5	4	5	---	---
9.	3.6	6.5	18.0	---	---	31.0	4	30	---	13.1
10.	3.5	6.6	10.0	---	---	6.0	4	98	---	13.1
11.	3.8	6.7	53.0	---	---	65.0	4	5	---	21.1
12.	3.6	6.4	17.5	---	---	27.0	4	25	---	9.5
13.	3.8	6.4	45.0	---	---	39.0	4	45	---	16.1
14.	3.7	6.4	19.5	---	---	10.0	4	60	---	16.2
15.	4.7	6.5	16.0	---	---	17.0	4	60	---	16.4
16.	3.7	6.6	27.0	---	---	38.9	4	10	---	16.0
17.	3.5	6.5	15.5	---	---	9.0	4	60	---	9.0
18.	3.8	6.5	21.0	---	---	31.5	4	15	---	14.7
19.	3.7	6.5	27.0	---	---	31.0	4	10	---	11.2
20.	3.8	---	6.2	---	---	7.0	4	0	---	---

TABLE IV.

Artemisia nova Study Area Horse Creek Date 9 September 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	4.7	7.8	27.5	---	---	25.0	4	20	---	9.6
2.	4.7	8.4	11.5	---	---	---	5	90	---	---
3.	4.7	8.3	14.0	---	---	17.5	4	10	---	14.1
4.	4.7	8.1	27.5	---	---	24.0	4	15	---	11.5
5.	4.5	8.4	18.0	---	---	27.5	4	10	---	8.7
6.	14.0	8.4	21.0	---	---	23.0	4	5	---	13.0
7.	4.7	8.4	28.0	---	---	11.0	4	80	---	19.2
8.	14.0	---	9.0	---	---	23.5	4	5	---	---
9.	4.9	8.5	18.0	---	---	31.0	4	30	---	13.1
10.	4.8	8.2	10.0	---	---	6.0	4	90	---	13.1
11.	4.8	7.8	53.0	---	---	65.0	4	30	---	21.1
12.	4.7	8.4	17.5	---	---	27.0	4	35	---	9.5
13.	4.8	8.7	45.0	---	---	39.0	4	45	---	16.1
14.	4.7	8.8	19.5	---	---	10.0	4	60	---	16.2
15.	4.7	8.7	16.0	---	---	17.0	4	60	---	16.4
16.	4.6	8.5	27.0	---	---	38.9	4	5	---	16.0
17.	4.8	8.5	15.5	---	---	9.0	4	90	---	9.0
18.	4.7	---	21.0	---	---	31.5	4	50	---	14.7
19.	4.8	8.4	27.0	---	---	31.0	4	20	---	11.2
20.	4.7	---	6.2	---	---	7.0	4	0	---	---

TABLE IV.

Artemisia nova Study Area Horse Creek Date 31 October 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT.	PLANT LNGTH.	PLANT WIDTH	PLANT DIAM.	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH.	NEW SEED STALK LNGTH
	VEG.	REPR.	cm	cm	cm	cm			cm	cm
1.	14.1	9.2	27.5	---	---	25.0	4	20	1.1	9.2
2.	14.6	---	11.5	---	---	---	5	90	1.1	---
3.	14.5	9.7	14.0	---	---	17.5	4	10	0.5	11.3
4.	14.2	9.7	27.5	---	---	24.0	4	15	0.6	9.3
5.	14.2	9.5	18.0	---	---	27.5	4	10	0.5	9.7
6.	14.4	9.8	21.0	---	---	23.0	4	5	0.7	14.7
7.	14.4	9.8	28.0	---	---	11.0	4	80	1.5	18.2
8.	14.5	---	9.0	---	---	23.5	4	5	2.2	---
9.	14.1	9.8	18.0	---	---	31.0	4	30	0.7	12.2
10.	14.1	---	10.0	---	---	6.0	4	90	0.9	---
11.	14.2	10.1	53.0	---	---	65.0	4	30	2.3	19.5
12.	14.2	9.8	17.5	---	---	27.0	4	35	1.1	5.7
13.	14.3	9.8	45.0	---	---	39.0	4	45	2.1	13.8
14.	14.1	10.5	19.5	---	---	10.0	4	60	0.9	14.0
15.	14.2	10.2	16.0	---	---	17.0	4	60	1.5	13.2
16.	14.2	10.3	27.0	---	---	38.9	4	5	2.1	13.2
17.	14.1	---	15.5	---	---	9.0	4	90	1.2	---
18.	14.4	---	21.0	---	---	31.5	4	50	0.8	---
19.	14.2	---	27.0	---	---	31.0	4	20	1.4	---
20.	14.1	---	6.2	---	---	7.0	4	0	0.7	---

TABLE IV.

Artemisia nova　　Study Area Owl Draw　　Date 1 June 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	2.8	---	6.4	---	---	---	---	0	---	---
2.	2.2	---	3.8	---	---	---	---	0	---	---
3.	3.2	---	12.0	---	---	---	---	0	---	---
4.	3.2	---	19.4	---	---	---	---	0	---	---
5.	3.2	---	8.9	---	---	---	---	0	---	---
6.	3.2	---	13.8	---	---	---	---	25	---	---
7.	3.2	---	14.0	---	---	---	---	5	---	---
8.	3.2	---	12.8	---	---	---	---	0	---	---
9.	3.8	---	13.5	---	---	---	---	2	---	---
10.	2.8	---	10.5	---	---	---	---	20	---	---
11.	3.3	---	11.5	---	---	---	---	15	---	---
12.	2.8	---	10.8	---	---	---	---	20	---	---
13.	2.8	---	10.0	---	---	---	---	0	---	---
14.	2.5	---	11.0	---	---	---	---	40	---	---
15.	2.5	---	13.8	---	---	---	---	2	---	---
16.	3.2	---	9.0	---	---	---	---	50	---	---
17.	3.2	---	11.5	---	---	---	---	0	---	---
18.	3.5	---	10.2	---	---	---	---	0	---	---
19.	2.8	---	9.2	---	---	---	---	15	---	---
20.	3.5	---	4.5	---	---	---	---	10	---	---

TABLE IV.

Artemisia nova Study Area Owl Draw Date 12 July 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT.	PLANT LNGTH.	PLANT WIDTH	PLANT DIAM.	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH.	NEW SEED STALK LNGTH	
	VEG.	REPR.	cm	cm	cm	cm			cm	cm	
1.	3.5	---	6.4	---	---	---	---	0	---	---	
2.	3.4	---	3.8	---	---	---	---	0	---	---	
3.	3.4	---	12.0	---	---	---	---	0	---	---	
4.	3.5	---	19.4	---	---	---	---	0	---	---	
5.	3.4	---	8.9	---	---	---	---	0	---	---	
6.	3.6	---	13.8	---	---	---	---	25	---	---	
7.	3.4	5.6	14.0	---	---	---	---	5	---	14.5	
8.	3.4	5.3	12.8	---	---	---	---	0	---	9.7	
9.	3.4	5.3	13.5	---	---	---	---	2	---	8.9	
10.	3.2	5.3	10.5	---	---	---	---	20	---	7.7	
11.	3.5	---	11.5	---	---	---	---	15	---	---	
12.	3.6	---	10.8	---	---	---	---	20	---	---	
13.	3.4	---	10.0	---	---	---	---	0	---	---	
14.	3.4	---	11.0	---	---	---	---	40	---	---	
15.	3.6	5.6	13.8	---	---	---	---	2	---	14.7	
16.	3.6	---	9.0	---	---	---	---	50	---	---	
17.	3.5	5.3	11.5	---	---	---	---	0	---	8.2	
18.	3.4	---	10.2	---	---	---	---	0	---	---	
19.	3.5	5.3	9.2	---	---	---	---	15	---	7.9	
20.	3.4	---	4.5	---	---	---	---	0	---	---	

TABLE IV.

Artemisia nova Study Area Owl Draw Date 26 July 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	3.7	---	6.4	---	---	9.0	2	0	---	---
2.	3.5	---	3.8	---	---	10.0	2	0	---	---
3.	3.6	---	12.0	---	---	11.0	2	0	---	---
4.	3.7	---	19.4	---	---	13.0	2	0	---	---
5.	3.6	---	8.9	---	---	11.5	2	0	---	---
6.	3.5	---	13.8	---	---	12.0	2	25	---	---
7.	3.8	5.8	14.0	---	---	15.0	4	5	---	14.5
8.	3.5	5.4	12.8	---	---	14.0	3	0	---	10.0
9.	3.7	5.4	13.5	---	---	16.0	4	2	---	8.5
10.	3.5	5.2	10.5	---	---	7.0	3	20	---	7.5
11.	3.5	---	11.5	---	---	14.0	2	15	---	---
12.	3.5	---	10.8	---	---	16.0	3	20	---	---
13.	3.5	---	10.0	---	---	5.0	3	0	---	---
14.	3.5	---	11.0	---	---	19.0	4	40	---	---
15.	3.7	5.8	13.8	---	---	34.0	4	2	---	18.5
16.	3.7	---	9.0	---	---	16.0	4	50	---	---
17.	3.7	5.5	11.5	---	---	14.0	4	0	---	10.0
18.	3.5	---	10.2	---	---	33.0	3	0	---	---
19.	3.7	5.4	9.2	---	---	16.5	4	15	---	14.5
20.	3.8	---	4.5	---	---	5.5	2	0	---	---

TABLE IV.

Artemisia nova Study Area Owl Draw Date 21 August 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	3.7	---	7.5	---	---	9.0	2	0	---	---
2.	3.5	---	13.0	---	---	10.0	2	0	---	---
3.	3.7	---	11.5	---	---	11.0	2	0	---	---
4.	3.6	---	10.0	---	---	13.0	2	0	---	---
5.	3.8	---	9.0	---	---	11.5	2	0	---	---
6.	3.7	---	13.5	---	---	12.0	2	25	---	---
7.	3.8	6.1	15.0	---	---	15.0	4	5	---	14.4
8.	3.6	5.8	10.0	---	---	14.0	3	0	---	10.5
9.	3.7	6.2	13.0	---	---	16.0	4	2	---	5.5
10.	3.7	6.3	8.0	---	---	7.0	3	20	---	8.0
11.	3.8	---	8.2	---	---	14.0	2	15	---	---
12.	3.7	---	11.0	---	---	16.0	3	20	---	---
13.	3.9	---	15.5	---	---	5.0	3	0	---	---
14.	3.6	---	9.0	---	---	19.0	4	40	---	---
15.	3.8	6.5	12.0	---	---	34.0	4	2	---	15.0
16.	3.8	---	7.5	---	---	16.0	4	50	---	---
17.	3.6	6.3	10.5	---	---	14.0	4	0	---	10.2
18.	3.7	---	13.5	---	---	33.0	3	0	---	---
19.	3.8	6.5	12.0	---	---	16.5	4	15	---	16.2
20.	3.6	---	15.0	---	---	5.5	2	0	---	---

TABLE IV.

Artemisia nova Study Area Owl Draw Date 29 October 1976

PLANT NO.	PHENO. STAGE SCORE VEG.	PHENO. STAGE SCORE REPR.	PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
1.	14.9	---	7.5	---	---	9.0	---	0	.5	---
2.	14.9	---	13.0	---	---	10.0	---	10	.3	---
3.	14.9	---	11.5	---	---	11.0	---	5	.5	---
4.	14.9	---	10.0	---	---	13.0	---	5	.3	---
5.	14.9	---	9.0	---	---	11.5	---	2	.6	---
6.	14.9	---	13.5	---	---	12.0	---	15	.5	---
7.	14.9	13.4	15.0	---	---	15.0	---	5	.6	14.4
8.	14.9	13.4	10.0	---	---	14.0	---	5	.5	10.5
9.	14.9	13.6	13.0	---	---	16.0	---	5	.7	5.5
10.	14.9	13.3	8.0	---	---	7.0	---	90	.3	8.0
11.	14.9	---	8.2	---	---	14.0	---	50	.4	---
12.	14.9	---	11.0	---	---	16.0	---	25	.3	---
13.	14.9	---	15.5	---	---	5.0	---	20	.3	---
14.	14.9	---	9.0	---	---	19.0	---	35	.4	---
15.	14.9	13.7	12.0	---	---	34.0	---	5	.5	15.0
16.	14.9	---	7.5	---	---	16.0	---	65	.6	---
17.	14.9	15.1	10.5	---	---	14.0	---	2	.5	10.2
18.	14.9	---	13.5	---	---	33.0	---	10	.4	---
19.	14.9	13.6	12.0	---	---	16.5	---	10	.4	16.2
20.	14.9	---	15.0	---	---	5.5	---	5	.3	---

TABLE IV.

Artemisia nova Study Area Sweetwater Date 3 June 1976

PLANT NO.	PHENO. STAGE SCORE VEG.	REPR.	PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm	
1.	2.2	---	11.5	---	---	---	---	80	---	---	
2.	2.4	---	17.8	---	---	---	---	65	---	---	
3.	2.2	---	10.5	---	---	---	---	15	---	---	
4.	2.5	---	12.8	---	---	---	---	10	---	---	
5.	2.2	---	5.0	---	---	---	---	15	---	---	
6.	2.0	---	2.5	---	---	---	---	20	---	---	
7.	2.0	---	15.8	---	---	---	---	80	---	---	
8.	2.2	---	11.2	---	---	---	---	85	---	---	
9.	2.2	---	15.8	---	---	---	---	5	---	---	
10.	2.2	---	9.0	---	---	---	---	15	---	---	
11.	2.4	---	14.2	---	---	---	---	0	---	---	
12.	2.4	---	10.9	---	---	---	---	5	---	---	
13.	2.2	---	4.2	---	---	---	---	0	---	---	
14.	2.2	---	5.5	---	---	---	---	0	---	---	
15.	2.2	---	11.0	---	---	---	---	25	---	---	
16.	2.8	---	5.5	---	---	---	---	5	---	---	
17.	2.2	---	7.7	---	---	---	---	90	---	---	
18.	2.8	---	9.0	---	---	---	---	15	---	---	
19.	2.2	---	7.2	---	---	---	---	10	---	---	
20.	2.2	---	9.4	---	---	---	---	10	---	---	

TABLE IV.

Artemisia nova   Study Area Sweetwater   Date 1 July 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT.	PLANT LNGTH.	PLANT WIDTH	PLANT DIAM.	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH.	NEW SEED STALK LNGTH
	VEG.	REPR.	cm	cm	cm	cm			cm	cm
1.	2.7	5.0	11.5	---	---	---	---	80	---	3.5
2.	3.0	5.1	17.8	NEW PLANT			---	---	---	5.8
3.	2.7	---	11.0	---	---	---	---	15	---	---
4.	2.9	5.2	12.8	---	---	---	---	10	---	6.7
5.	2.5	---	5.0	---	---	---	---	15	---	---
6.	2.8	5.1	2.5	---	---	---	---	20	---	6.0
7.	2.6	5.0	15.8	---	---	---	---	80	---	2.1
8.	2.4	5.0	11.2	---	---	---	---	85	---	2.5
9.	2.7	5.0	15.8	---	---	---	---	5	---	3.5
10.	2.7	5.2	9.0	---	---	---	---	15	---	4.5
11.	2.8	5.2	14.2	---	---	---	---	0	---	5.3
12.	2.8	5.2	10.9	---	---	---	---	5	---	6.4
13.	2.8	5.1	4.2	---	---	---	---	0	---	5.0
14.	2.7	5.1	5.5	---	---	---	---	0	---	4.5
15.	2.6	5.2	11.0	---	---	---	---	25	---	6.1
16.	2.6	5.0	5.5	---	---	---	---	5	---	3.0
17.	2.4	---	7.7	---	---	---	---	90	---	---
18.	2.6	5.0	9.0	---	---	---	---	15	---	2.0
19.	2.7	5.2	6.5	NEW PLANT			---	---	---	4.0
20.	2.8	5.2	9.4	---	---	---	---	10	---	6.2

TABLE IV.

Artemisia nova Study Area Sweetwater Date 2 August 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	3.1	---	11.5	---	---	7.0	4	80	---	---
2.	3.5	5.3	17.8	---	---	52.0	4	---	---	8.0
3.	3.2	5.3	11.0	---	---	35.0	4	15	---	7.0
4.	3.4	5.4	12.8	---	---	34.0	4	10	---	7.0
5.	3.3	---	5.0	---	---	8.0	3	15	---	---
6.	3.3	---	2.5	---	---	13.0	4	20	---	7.5
7.	3.3	5.1	15.8	---	---	13.0	4	80	---	4.0
8.	3.1	5.1	11.2	---	---	23.0	5	85	---	4.0
9.	3.5	---	15.8	---	---	30.0	5	5	---	---
10.	3.4	5.2	9.0	---	---	17.0	4	15	---	5.0
11.	3.8	5.3	14.2	---	---	36.0	4	0	---	7.0
12.	3.5	5.1	10.9	---	---	25.0	4	5	---	11.0
13.	3.9	5.3	4.2	---	---	72.0	4	0	---	10.0
14.	3.4	5.0	5.5	---	---	9.0	3	0	---	5.0
15.	3.6	---	11.0	---	---	13.0	4	25	---	---
16.	3.3	---	5.5	---	---	8.0	3	5	---	---
17.	3.1	---	7.7	---	---	33.0	5	90	---	---
18.	3.5	000	9.0	---	---	28.0	4	15	---	---
19.	3.3	5.1	6.5	---	---	27.0	4	000	000	5.0
20.	3.9	5.4	9.4	---	---	28.0	4	10	---	5.0

TABLE IV.

Artemisia nova Study Area Sweetwater Date 18 August 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	3.9	5.8	11.5	---	---	7.0	4	80	---	5.0
2.	3.8	6.0	17.8	---	---	52.0	4	---	---	7.0
3.	3.7	6.0	11.0	---	---	35.0	4	15	---	12.0
4.	3.7	5.8	12.8	---	---	34.0	4	10	---	7.5
5.	3.5	---	5.0	---	---	8.0	3	15	---	---
6.	3.6	5.9	2.5	---	---	13.0	4	20	---	6.0
7.	3.4	5.4	15.8	---	---	13.0	4	80	---	5.0
8.	3.6	5.2	11.2	---	---	23.0	5	85	---	4.0
9.	3.8	---	15.8	---	---	30.0	4	5	---	---
10.	3.4	5.1	9.0	---	---	17.0	4	15	---	6.0
11.	3.6	6.1	14.2	---	---	36.0	4	0	---	7.0
12.	3.7	5.8	10.9	---	---	25.0	4	5	---	9.0
13.	4.0	11.5	4.2	---	---	72.0	4	0	---	6.0
14.	3.5	---	5.5	---	---	9.0	3	0	---	---
15.	3.7	5.2	11.0	---	---	13.0	4	25	---	5.5
16.	3.4	5.1	5.5	---	---	8.0	3	5	---	4.0
17.	3.2	---	7.7	---	---	33.0	4	90	---	---
18.	3.5	---	9.0	---	---	28.0	4	15	---	---
19.	3.4	5.1	6.5	---	---	27.0	4	---	---	4.5
20.	3.9	5.8	9.4	---	---	28.0	4	10	---	5.5

TABLE IV.

Artemisia nova　　Study Area Sweetwater　　Date 19 September 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	4.9	---	15.0	---	---	7.0	4	80	0.5	---
2.	14.0	10.1	17.0	---	---	52.0	4	---	0.5	9.0
3.	14.0	---	11.0	---	---	35.0	4	15	0.5	---
4.	14.1	10.0	14.0	---	---	34.0	4	10	0.5	7.0
5.	4.9	---	6.0	---	---	8.0	3	15	0.5	---
6.	14.2	9.8	9.0	---	---	13.0	4	20	0.5	5.0
7.	4.9	10.0	17.0	---	---	13.0	4	80	0.5	4.0
8.	4.9	9.9	10.0	---	---	23.0	5	85	0.5	4.5
9.	4.9	---	19.5	---	---	30.0	4	5	0.5	---
10.	14.0	10.1	10.0	---	---	17.0	4	15	0.5	4.0
11.	14.2	9.9	13.0	---	---	36.0	4	0	0.5	6.0
12.	14.0	10.1	14.0	---	---	25.0	4	5	0.5	8.0
13.	14.0	10.3	15.0	---	---	72.0	4	0	0.5	4.5
14.	14.0	---	5.0	---	---	9.0	3	0	0.5	---
15.	4.8	10.3	4.5	---	---	13.0	4	25	0.5	6.0
16.	4.9	---	4.0	---	---	8.0	3	5	0.5	---
17.	14.0	---	12.0	---	---	33.0	5	90	0.3	---
18.	14.0	---	8.0	---	---	28.0	4	15	0.5	---
19.	4.9	9.5	12.0	---	---	27.0	4	---	0.5	4.0
20.	4.9	10.0	10.0	---	---	28.0	4	10	0.5	4.5

TABLE IV.

Artemisia nova Study Area Sweetwater Date 1 November 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	14.1	9.7	15.0	---	---	7.0	4	80	0.5	---
2.	14.2	10.7	17.0	---	---	52.0	4	---	0.5	9.0
3.	14.4	10.7	11.0	---	---	35.0	4	15	0.5	---
4.	14.1	11.5	14.0	---	---	34.0	4	10	0.5	7.0
5.	14.5	9.8	6.0	---	---	8.0	3	15	0.5	---
6.	14.3	10.1	9.0	---	---	13.0	4	20	0.5	5.0
7.	14.7	---	17.0	---	---	13.0	4	80	0.5	4.0
8.	14.3	10.2	10.0	---	---	23.0	5	85	0.5	4.5
9.	14.3	---	19.5	---	---	30.0	4	5	0.5	---
10.	14.3	9.9	10.0	---	---	17.0	4	15	0.5	4.0
11.	14.3	10.4	13.0	---	---	36.0	4	0	0.5	6.0
12.	14.2	---	14.0	---	---	25.0	4	5	0.5	8.0
13.	14.3	10.7	15.0	---	---	72.0	4	0	0.5	4.5
14.	14.2	---	5.0	---	---	9.0	3	0	0.5	---
15.	14.2	---	4.5	---	---	13.0	4	25	0.5	6.0
16.	14.1	---	4.0	---	---	8.0	3	5	0.5	---
17.	14.5	---	12.0	---	---	33.0	5	90	0.3	---
18.	14.4	---	8.0	---	---	28.0	4	15	0.5	---
19.	14.1	10.6	12.0	---	---	27.0	4	---	0.5	4.0
20.	14.1	10.9	10.8	---	---	28.0	4	10	0.5	4.5

TABLE IV.

Artemisia tridentata Study Area Bud Kimball Date 2 June 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	2.2	---	19.5	---	---	---	---	10	---	---
2.	2.2	---	9.0	---	---	---	---	0	---	---
3.	2.3	---	21.0	---	---	---	---	90	---	---
4.	2.4	---	13.4	---	---	---	---	0	---	---
5.	2.2	---	36.3	---	---	---	---	12	---	---
6.	2.3	---	17.2	---	---	---	---	5	---	---
7.	2.3	---	13.8	---	---	---	---	0	---	---
8.	2.3	---	30.8	---	---	---	---	4	---	---
9.	2.4	---	11.6	---	---	---	---	15	---	---
10.	2.3	---	14.6	---	---	---	---	12	---	---
11.	2.8	---	25.8	---	---	---	---	7	---	---
12.	2.2	---	13.0	---	---	---	---	0	---	---
13.	2.8	---	13.5	---	---	---	---	0	---	---
14.	2.4	---	19.0	---	---	---	---	0	---	---
15.	2.4	---	22.3	---	---	---	---	5	---	---
16.	2.6	---	19.8	---	---	---	---	40	---	---
17.	2.3	---	25.4	---	---	---	---	0	---	---
18.	2.6	---	58.2	---	---	---	---	3	---	---
19.	2.2	---	26.5	---	---	---	---	65	---	---
20.	2.4	---	16.4	---	---	---	---	10	---	---

TABLE IV.

Artemisia tridentata   Study Area Bud Kimball   Date 12 July 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT.	PLANT LNGTH.	PLANT WIDTH	PLANT DIAM.	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH.	NEW SEED STALK LNGTH
	VEG.	REPR.	cm	cm	cm	cm			cm	cm
1.	3.0	---	19.5	---	---	---	---	10	---	---
2.	2.8	---	10.5	---	---	---	---	0	---	---
3.	2.7	---	15.5	---	---	---	---	90	---	---
4.	2.5	---	12.5	---	---	---	---	0	---	---
5.	3.0	---	25.0	---	---	---	---	12	---	---
6.	2.6	5.0	18.5	---	---	---	---	5	---	5.5
7.	2.5	---	14.2	---	---	---	---	0	---	---
8.	2.5	5.4	26.4	---	---	---	---	4	---	7.2
9.	3.1	---	12.5	---	---	---	---	15	---	---
10.	2.5	---	7.5	---	---	---	---	12	---	---
11.	3.1	---	24.5	---	---	---	---	7	---	---
12.	2.6	---	13.5	---	---	---	---	0	---	---
13.	3.2	---	17.5	---	---	---	---	0	---	---
14.	3.0	---	20.4	---	---	---	---	0	---	---
15.	3.1	5.3	25.5	---	---	---	---	5	---	9.0
16.	2.7	---	20.5	---	---	---	---	40	---	---
17.	3.5	5.8	34.0	---	---	---	---	0	---	11.0
18.	3.4	5.3	50.0	---	---	---	---	3	---	14.2
19.	2.7	5.2	22.5	---	---	---	---	65	---	13.0
20.	3.1	---	16.5	---	---	---	---	1.0	---	---

TABLE IV.

Artemisia tridentata Study Area Bud Kimball Date 28 July 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	3.2	---	23	---	---	31	4	10	---	---
2.	3.1	---	9	---	---	12	3	0	---	---
3.	3.3	5.0	20	---	---	18	5	90	---	3.5
4.	3.2	---	10	---	---	15	3	0	---	---
5.	3.2	---	29	---	---	24	4	12	---	---
6.	3.3	5.0	17	---	---	22	4	5	---	6.0
7.	3.2	---	15	---	---	9	2	0	---	---
8.	3.3	5.0	30	---	---	27	4	4	---	5.0
9.	3.3	---	13	---	---	14	3	15	---	---
10.	3.3	---	20	---	---	18	3	12	---	---
11.	3.4	---	23	---	---	31	4	7	---	---
12.	3.3	---	13	---	---	8	3	0	---	---
13.	3.4	---	13	---	---	12	3	0	---	---
14.	3.3	---	21	---	---	14	3	0	---	---
15.	3.4	5.6	27.5	---	---	27	4	5	---	10.0
16.	3.6	---	24	---	---	12	3	40	---	---
17.	3.7	5.6	43	---	---	17	4	0	---	10.0
18.	3.6	5.4	45	---	---	26	4	3	---	13.0
19.	3.6	5.3	25	---	---	13	4	65	---	10.0
20.	3.4	---	18	---	---	19	3	10	---	---

TABLE IV.

Artemisia tridentata Study Area Bud Kimball Date 18 August 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	3.6	---	16.0	---	---	31	4	10	---	---
2.	3.4	---	9.0	---	---	12	3	0	---	---
3.	3.5	6.1	17.5	---	---	18	5	90	---	3.5
4.	3.6	---	12.0	---	---	15	3	0	---	---
5.	3.7	---	34.0	---	---	24	4	12	---	---
6.	3.4	6.2	18.0	---	---	22	4	5	---	6.5
7.	3.7	---	14.0	---	---	9	2	0	---	---
8.	3.7	6.4	33.0	---	---	27	4	4	---	8.0
9.	3.6	---	11.5	---	---	14	3	15	---	---
10.	3.7	---	14.5	---	---	18	3	12	---	---
11.	3.8	6.5	23.5	---	---	31	4	7	---	7.0
12.	3.5	---	12.0	---	---	8	3	0	---	---
13.	3.6	---	13.5	---	---	12	3	0	---	---
14.	3.6	---	17.0	---	---	14	3	0	---	---
15.	3.7	6.0	22.5	---	---	27	4	5	---	9.4
16.	3.6	---	22.0	---	---	12	3	40	---	---
17.	3.8	6.5	52.0	---	---	17	4	0	---	7.5
18.	3.7	6.5	56.0	---	---	26	4	3	---	18.0
19.	3.8	6.2	26.0	---	---	13	4	65	---	13.0
20.	3.5	---	16.0	---	---	19	3	10	---	---

TABLE IV.

Artemisia tridentata Study Area Bud Kimball Date 31 October 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	14.0	---	16.0	---	---	31	4	40	.4	---
2.	14.0	---	9.0	---	---	12	3	0	.5	---
3.	14.0	15.2	17.5	---	---	18	5	85	.6	3.5
4.	14.0	---	12.0	---	---	15	3	2	.6	---
5.	14.0	---	34.0	---	---	24	4	5	.6	---
6.	14.0	13.9	18.0	---	---	22	4	10	.7	6.5
7.	14.0	---	14.0	---	---	9	2	5	1.3	---
8.	14.0	13.9	33.0	---	---	27	4	5	.7	8.0
9.	14.0	---	11.5	---	---	14	3	25	.7	---
10.	14.1	---	14.5	---	---	18	3	20	1.0	---
11.	14.1	13.9	23.5	---	---	31	4	10	1.5	7.0
12.	4.9	---	12.0	---	---	8	3	1	1.0	---
13.	4.9	---	13.5	---	---	12	3	1	1.1	---
14.	4.9	---	17.0	---	---	14	3	5	1.4	---
15.	14.0	13.9	22.5	---	---	27	4	15	.9	9.4
16.	14.1	---	22.0	---	---	12	3	75	2.0	---
17.	14.0	---	52.0	---	---	17	4	40	.7	7.5
18.	14.0	13.9	56.0	---	---	26	4	25	2.6	18.0
19.	14.0	15.0	26.0	---	---	13	4	75	1.8	13.0
20.	14.0	---	16.0	---	---	19	3	15	2.3	---

TABLE IV.

Artemisia tridentata Study Area Cedar Mountain Date 4 June 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	2.2	---	6.5	---	---	---	---	0	---	---
2.	2.5	---	17.0	---	---	---	---	10	---	---
3.	2.8	---	32.5	---	---	---	---	0	---	---
4.	2.2	---	4.5	---	---	---	---	0	---	---
5.	2.8	---	10.0	---	---	---	---	0	---	---
6.	2.8	---	18.0	---	---	---	---	0	---	---
7.	2.6	---	33.0	---	---	---	---	5	---	---
8.	2.8	---	24.0	---	---	---	---	5	---	---
9.	2.6	---	33.0	---	---	---	---	5	---	---
10.	2.9	---	46.0	---	---	---	---	5	---	---
11.	2.2	---	15.0	---	---	---	---	70	---	---
12.	2.4	---	5.0	---	---	---	---	0	---	---
13.	2.2	---	3.0	---	---	---	---	0	---	---
14.	2.9	---	4.0	---	---	---	---	0	---	---
15.	2.7	---	5.0	---	---	---	---	0	---	---
16.	2.8	---	21.5	---	---	---	---	35	---	---
17.	2.6	---	43.0	---	---	---	---	10	---	---
18.	2.9	---	8.0	---	---	---	---	0	---	---
19.	2.9	---	39.0	---	---	---	---	50	---	---
20.	2.8	---	11.0	---	---	---	---	0	---	---

TABLE IV.

Artemisia tridentata Study Area Cedar Mountain Date 15 July 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	3.1	---	6.5	---	---	---	---	0	---	---
2.	3.1	---	17.0	---	---	---	---	10	---	---
3.	3.2	5.3	32.5	---	---	---	---	0	---	9.0
4.	2.9	---	4.5	---	---	---	---	0	---	---
5.	3.3	---	10.0	---	---	---	---	0	---	---
6.	3.2	5.1	18.0	---	---	---	---	0	---	4.5
7.	3.1	---	33.0	---	---	---	---	5	---	---
8.	3.2	5.2	24.0	---	---	---	---	5	---	4.5
9.	3.3	5.5	33.0	---	---	---	---	5	---	7.0
10.	3.5	5.8	46.0	---	---	---	---	5	---	11.0
11.	3.1	---	15.0	---	---	---	---	70	---	---
12.	3.0	---	5.0	---	---	---	---	0	---	---
13.	3.0	---	3.0	---	---	---	---	0	---	---
14.	3.3	---	4.0	---	---	---	---	0	---	---
15.	3.1	---	5.0	---	---	---	---	0	---	---
16.	3.0	5.2	21.5	---	---	---	---	35	---	6.0
17.	3.2	5.3	43.0	---	---	---	---	10	---	5.0
18.	3.6	---	8.0	---	---	---	---	0	---	---
19.	3.1	5.1	39.0	---	---	---	---	50	---	7.0
20.	3.4	---	11.0	---	---	---	---	0	---	---

TABLE IV.

Artemisia tridentata　Study Area Cedar Mountain　Date 5 August 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	3.5	---	7.0	---	---	5.5	2	0	---	---
2.	3.4	---	18.0	---	---	14.0	4	10	---	---
3.	3.4	5.2	34.0	---	---	24.0	4	0	---	8.0
4.	3.0	---	5.0	---	---	2.0	2	0	---	---
5.	3.2	---	18.0	---	---	8.0	2	0	---	---
6.	3.2	5.0	20.0	---	---	20.0	3	0	---	4.0
7.	3.2	11.5	35.0	---	---	28.0	4	5	---	12.0
8.	3.3	5.0	20.0	---	---	24.0	4	5	---	4.5
9.	3.6	12.0	35.0	---	---	75.0	4	5	---	18.0
10.	3.7	11.5	47.0	---	---	65.0	4	5	---	20.0
11.	3.0	---	15.0	---	---	11.0	4	70	---	---
12.	3.0	---	5.0	---	---	8.0	2	0	---	---
13.	3.8	---	3.0	---	---	3.0	2	0	---	---
14.	3.0	---	4.0	---	---	5.5	2	0	---	---
15.	3.2	---	5.5	---	---	6.0	2	0	---	---
16.	3.2	11.5	22.0	---	---	20.0	4	35	---	21.0
17.	3.4	11.5	39.0	---	---	70.0	4	10	---	16.5
18.	3.4	---	9.5	---	---	7.0	2	0	---	---
19.	3.1	11.8	39.0	---	---	19.0	4	50	---	14.0
20.	3.1	---	13.0	---	---	11.0	2	0	---	---

TABLE IV.

Artemisia tridentata Study Area Cedar Mountain Date 19 August 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	4.3	---	7.0	---	---	5.5	2	0	1.0	---
2.	4.0	---	18.0	---	---	14.0	4	10	1.5	---
3.	4.2	5.8	34.0	---	---	24.0	4	0	3.0	8.2
4.	4.3	---	5.0	---	---	2.0	2	0	.7	---
5.	4.2	---	18.0	---	---	8.0	2	0	2.7	---
6.	4.2	---	20.0	---	---	20.0	3	0	2.0	---
7.	4.2	---	35.0	---	---	28.0	4	5	2.0	---
8.	4.5	5.3	20.0	---	---	24.0	4	5	2.5	5.0
9.	4.5	5.7	35.0	---	---	75.0	5	5	2.5	7.5
10.	4.3	5.8	47.0	---	---	65.0	4	5	3.0	11.0
11.	4.2	5.9	15.0	---	---	11.0	4	70	2.0	10.2
12.	4.2	---	5.0	---	---	8.0	2	0	.5	---
13.	4.4	5.9	3.0	---	---	3.0	2	0	2.5	9.0
14.	4.5	---	4.0	---	---	5.5	2	0	2.5	---
15.	4.4	---	5.5	---	---	6.0	2	0	1.5	---
16.	4.2	5.6	22.0	---	---	20.0	4	35	1.5	6.5
17.	4.1	---	39.0	---	---	70.0	4	10	1.5	---
18.	4.4	---	9.5	---	---	7.0	2	0	4.0	---
19.	4.2	5.3	39.0	---	---	19.0	4	50	2.0	3.0
20.	4.3	---	13.0	---	---	11.0	2	0	2.5	---

TABLE IV.

Artemisia tridentata Study Area Cedar Mountain Date 6 November 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	14.4	---	7.8	---	---	5.5	2	0	1.0	---
2.	14.4	---	18.0	---	---	14.0	4	10	1.5	---
3.	14.4	15.1	34.0	---	---	24.0	4	0	3.0	8.2
4.	14.4	---	5.0	---	---	2.0	2	0	.7	---
5.	14.2	---	18.0	---	---	8.0	2	0	2.7	---
6.	14.2	---	20.0	---	---	20.0	3	0	2.0	---
7.	14.4	---	35.0	---	---	28.0	4	5	2.0	---
8.	14.3	15.8	20.0	---	---	24.0	4	5	2.5	5.0
9.	14.5	15.6	35.0	---	---	75.0	4	5	2.5	7.5
10.	14.5	15.8	47.0	---	---	65.0	4	5	3.0	11.0
11.	14.7	15.8	15.0	---	---	11.0	4	70	2.0	10.2
12.	14.3	---	5.0	---	---	8.0	2	0	.5	---
13.	14.6	15.8	3.0	---	---	3.0	2	0	2.5	9.0
14.	14.4	---	4.0	---	---	5.5	3	0	2.5	---
15.	14.3	---	5.5	---	---	6.0	4	0	1.5	---
16.	14.7	15.9	22.0	---	---	20.0	20.0	35	1.5	6.5
17.	14.7	---	39.0	---	---	70.0	70.0	10	1.5	---
18.	14.4	---	9.5	---	---	7.0	7.0	0	4.0	---
19.	14.6	15.8	39.0	---	---	19.0	19.0	50	2.0	3.0
20.	14.7	---	13.0	---	---	11.0	11.0	0	2.5	---

TABLE IV.

Artemisia tridentata Study Area Cumberland #3 Date 4 June 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm	
	VEG.	REPR.									
1.	2.4	---	47.0	---	---	---	---	50	---	---	
2.	2.2	---	31.5	---	---	---	---	45	---	---	
3.	2.9	---	29.5	---	---	---	---	5	---	---	
4.	2.8	---	47.5	---	---	---	---	5	---	---	
5.	2.9	---	56.5	---	---	---	---	35	---	---	
6.	2.7	---	32.5	---	---	---	---	40	---	---	
7.	2.9	---	39.0	---	---	---	---	0	---	---	
8.	2.6	---	50.0	---	---	---	---	75	---	---	
9.	2.6	---	36.0	---	---	---	---	40	---	---	
10.	2.4	---	75.5	---	---	---	---	55	---	---	
11.	2.5	---	34.0	---	---	---	---	30	---	---	
12.	2.9	---	23.0	---	---	---	---	5	---	---	
13.	2.9	---	75.0	---	---	---	---	10	---	---	
14.	2.9	---	66.0	---	---	---	---	5	---	---	
15.	2.3	---	69.0	---	---	---	---	25	---	---	
16.	2.9	---	56.5	---	---	---	---	10	---	---	
17.	2.5	---	64.0	---	---	---	---	80	---	---	
18.	2.8	---	48.0	---	---	---	---	20	---	---	
19.	2.8	---	59.0	---	---	---	---	45	---	---	
20.	2.9	---	45.5	---	---	---	---	35	---	---	

TABLE IV.

Artemisia tridentata Study Area Cumberland #3 Date 14 July 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	3.2	---	47.0	---	---	---	---	50	---	---
2.	2.7	---	31.5	---	---	---	---	45	---	---
3.	3.0	---	29.5	---	---	---	---	5	---	---
4.	3.2	5.4	47.5	---	---	---	---	5	---	8.0
5.	2.8	5.0	56.5	---	---	---	---	35	---	6.0
6.	2.8	---	32.5	---	---	---	---	40	---	---
7.	3.2	5.0	39.0	---	---	---	---	0	---	7.0
8.	3.0	---	50.0	---	---	---	---	75	---	---
9.	2.9	---	36.0	---	---	---	---	40	---	---
10.	2.6	---	75.5	---	---	---	---	55	---	---
11.	2.7	5.0	34.0	---	---	---	---	30	---	5.5
12.	3.1	---	23.0	---	---	---	---	5	---	---
13.	3.4	5.7	75.0	---	---	---	---	10	---	13.5
14.	3.2	5.6	66.0	---	---	---	---	5	---	7.5
15.	2.6	---	69.0	---	---	---	---	25	---	---
16.	3.4	5.7	56.5	---	---	---	---	10	---	10.5
17.	3.2	---	64.0	---	---	---	---	80	---	---
18.	3.2	5.1	48.0	---	---	---	---	20	---	6.0
19.	3.5	5.3	59.0	---	---	---	---	45	000	10.5
20.	3.6	5.2	45.5	---	---	---	---	35	---	7.5

TABLE IV.

Artemisia tridentata Study Area Cumberland #3 Date 4 August 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	3.6	---	47.0	---	---	23.0	4	50	---	---
2.	3.0	---	31.5	---	---	13.0	2	45	---	---
3.	3.4	---	29.5	---	---	15.0	4	5	---	---
4.	3.5	5.8	47.5	---	---	55.0	4	5	---	7.5
5.	3.4	5.2	56.5	---	---	39.0	4	35	---	6.5
6.	3.2	---	32.5	---	---	16.0	2	40	---	---
7.	3.5	5.4	39.0	---	---	36.0	3	0	---	5.0
8.	3.2	---	50.0	---	---	22.0	2	75	---	---
9.	3.4	---	36.0	---	---	14.0	2	40	---	---
10.	3.2	---	75.5	---	---	56.0	4	55	---	---
11.	3.2	5.2	34.0	---	---	24.0	2	30	---	5.0
12.	3.2	---	23.0	---	---	24.0	2	5	---	---
13.	3.6	5.8	75.0	---	---	55.0	4	10	---	7.0
14.	3.8	6.0	66.0	---	---	55.0	4	5	---	7.0
15.	3.5	---	69.0	---	---	35.0	4	25	---	---
16.	3.9	6.0	56.5	---	---	55.0	4	10	---	9.0
17.	3.4	5.0	64.0	---	---	15.0	2	80	---	5.0
18.	3.6	---	48.0	---	---	38.0	3	20	---	---
19.	3.8	5.9	59.0	---	---	47.0	4	45	---	9.5
20.	4.0	5.5	45.5	---	---	32.0	4	35	---	9.0

TABLE IV.

Artemisia tridentata　　Study Area Cumberland #3　　Date 19 August 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	3.9	---	49.0	---	---	23.0	4	50	3.0	---
2.	3.9	---	32.0	---	---	13.0	2	45	1.0	---
3.	4.1	---	33.0	---	---	15.0	4	5	6.0	---
4.	4.1	5.4	79.0	---	---	55.0	4	5	3.0	8.0
5.	4.3	5.3	65.0	---	---	39.0	4	35	2.0	7.5
6.	4.0	---	26.0	---	---	16.0	2	40	3.0	---
7.	4.1	5.5	41.0	---	---	36.0	3	0	3.0	6.0
8.	3.9	---	52.0	---	---	22.0	2	75	2.0	---
9.	4.1	---	35.0	---	---	14.0	2	40	2.5	---
10.	4.2	---	75.0	---	---	56.0	4	55	4.0	---
11.	4.1	---	34.0	---	---	24.0	2	30	2.0	---
12.	4.2	5.4	28.0	---	---	24.0	2	5	4.0	10.0
13.	4.2	77.0	---	---	---	55.0	4	10	2.0	8.0
14.	3.9	5.7	65.0	---	---	55.0	4	5	2.5	8.5
15.	4.1	---	63.0	---	---	35.0	4	25	2.0	---
16.	4.1	5.3	60.0	---	---	55.0	4	10	2.0	7.5
17.	3.9	5.3	61.0	---	---	15.0	2	80	1.5	5.0
18.	4.1	---	50.0	---	---	38.00	3	20	3.5	---
19.	4.4	---	60.0	---	---	47.0	4	45	6.0	---
20.	4.3	5.4	46.0	---	---	32.0	4	35	5.5	9.0

TABLE IV.

Artemisia tridentata Study Area Cumberland #3 Date 18 September 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm	
	VEG.	REPR.									
1.	14.2	---	49.0	---	---	23.0	4	50	3.0	---	
2.	14.2	---	32.0	---	---	13.0	2	45	1.0	---	
3.	4.9	---	33.0	---	---	15.0	4	5	6.0	---	
4.	14.1	10.5	79.0	---	---	55.0	4	5	3.0	4.0	
5.	4.8	7.5	65.0	---	---	39.0	4	35	2.0	4.0	
6.	14.0	---	26.0	---	---	16.0	2	40	3.0	---	
7.	14.0	9.0	41.0	---	---	36.0	3	0	3.0	6.0	
8.	4.9	---	52.0	---	---	22.0	2	75	2.0	---	
9.	4.9	---	35.0	---	---	14.0	2	40	2.5	---	
10.	4.9	---	75.0	---	---	56.0	4	55	4.0	---	
11.	4.9	---	34.0	---	---	24.0	2	30	2.0	---	
12.	4.9	---	28.0	---	---	24.0	2	5	4.0	---	
13.	14.0	9.8	77.0	---	---	55.0	4	10	2.0	10.0	
14.	14.1	9.8	65.0	---	---	55.0	4	5	2.5	7.0	
15.	4.9	10.0	63.0	---	---	35.0	4	25	2.0	4.0	
16.	4.9	10.2	60.0	---	---	55.0	4	10	2.0	6.5	
17.	14.1	6.5	61.0	---	---	15.0	2	80	1.5	3.0	
18.	4.9	11.2	50.0	---	---	38.0	3	20	3.5	4.5	
19.	14.2	9.9	60.0	---	---	47.0	4	45	6.0	8.0	
20.	14.2	8.6	46.0	---	---	32.0	4	30	5.5	10.0	

TABLE IV.

Artemisia tridentata Study Area Cumberland #3 Date 7 November 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	14.5	---	49.0	---	---	23.0	4	50	3.1	---
2.	14.7	---	32.0	---	---	13.0	2	45	1.0	---
3.	14.4	---	33.0	---	---	15.0	4	5	6.4	---
4.	14.7	13.8	79.0	---	---	55.0	4	5	3.0	4.0
5.	14.7	13.8	65.0	---	---	39.0	4	35	2.0	4.0
6.	14.4	---	26.0	---	---	16.0	2	40	3.0	---
7.	14.4	13.8	41.0	---	---	36.0	3	0	3.0	6.0
8.	14.4	---	52.0	---	---	22.0	2	75	2.0	---
9.	14.7	---	35.0	---	---	14.0	2	40	2.5	---
10.	14.6	15.2	75.0	---	---	56.0	4	55	4.0	7.1
11.	14.7	---	34.0	---	---	24.0	2	30	2.0	---
12.	14.4	---	28.0	---	---	24.0	2	5	4.0	---
13.	14.3	15.1	77.0	---	---	55.0	4	10	2.0	10.0
14.	14.5	15.0	65.0	---	---	55.0	4	5	2.5	7.0
15.	14.8	13.9	63.0	---	---	35.0	4	25	2.0	4.0
16.	14.6	13.7	60.0	---	---	55.0	4	10	2.0	6.5
17.	14.5	15.2	61.0	---	---	15.0	2	80	1.5	3.0
18.	14.7	15.2	50.0	---	---	38.0	3	20	3.5	4.5
19.	14.5	15.2	60.0	---	---	47.0	4	45	6.0	8.0
20.	14.7	15.1	46.0	---	---	32.0	4	30	5.5	10.0

TABLE IV.

Artemisia tridentata Study Area Demer Date 2 June 1976

PLANT NO.	PHENO. STAGE SCORE.		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm	
	VEG.	REPR.									
1.	2.5	---	21.0	---	---	---	---	5	---	---	
2.	2.2	---	25.0	---	---	---	---	0	---	---	
3.	2.2	---	19.0	---	---	---	---	80	---	---	
4.	2.6	---	14.6	---	---	---	---	35	---	---	
5.	2.8	---	19.0	---	---	---	---	25	---	---	
6.	2.3	---	27.0	---	---	---	---	25	---	---	
7.	2.5	---	8.5	---	---	---	---	5	---	---	
8.	2.4	---	26.0	---	---	---	---	18	---	---	
9.	2.2	---	29.0	---	---	---	---	0	---	---	
10.	2.5	---	41.0	---	---	---	---	0	---	---	
11.	2.2	---	30.0	---	---	---	---	0	---	---	
12.	2.8	---	31.0	---	---	---	---	0	---	---	
13.	2.0	---	32.0	---	---	---	---	50	---	---	
14.	2.4	---	38.0	---	---	---	---	15	---	---	
15.	2.8	---	51.0	---	---	---	---	15	---	---	
16.	2.4	---	19.0	---	---	---	---	10	---	---	
17.	2.5	---	14.5	---	---	---	---	2	---	---	
18.	2.6	---	24.0	---	---	---	---	5	---	---	
19.	2.5	---	27.5	---	---	---	---	60	---	---	
20.	2.2	---	28.0	---	---	---	---	15	---	---	

TABLE IV.

Artemisia tridentata Study Area Demer Date 6 July 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	3.2	---	23	---	---	---	---	5	---	---
2.	3.3	---	30	---	---	---	---	0	---	---
3.	3.4	5.1	16	---	---	---	---	80	---	4
4.	3.1	5.1	14	---	---	---	---	35	---	6
5.	3.3	---	18	---	---	---	---	25	---	---
6.	2.6	---	31	---	---	---	---	25	---	---
7.	2.7	---	9	---	---	---	---	5	---	---
8.	2.9	---	14	---	---	---	---	18	---	---
9.	3.5	5.2	32	---	---	---	---	0	---	5
10.	3.6	5.3	41	---	---	---	---	0	---	8
11.	3.8	5.2	30	---	---	---	---	0	---	8
12.	3.5	---	31	---	---	---	---	0	---	---
13.	3.3	5.0	34	---	---	---	---	50	---	7.5
14.	3.6	---	39	---	---	---	---	15	---	---
15.	3.3	5.2	50	---	---	---	---	15	---	12
16.	3.5	---	16	---	---	---	---	10	---	---
17.	3.7	---	14	---	---	---	---	2	---	---
18.	3.3	5.0	22	---	---	---	---	5	---	7.5
19.	3.4	---	21	---	---	---	---	60	---	---
20.	3.4	5.0	29	---	---	---	---	15	---	6.8

TABLE IV.

Artemisia tridentata Study Area Demer Date 28 July 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT.	PLANT LNGTH.	PLANT WIDTH	PLANT DIAM.	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.	cm	cm	cm	cm				
1.	3.2	---	21.0	---	---	26.0	4	5	---	---
2.	3.5	5.2	26.0	---	---	27.0	4	0	---	4.5
3.	3.1	5.1	13.0	---	---	15.0	5	80	---	4.0
4.	3.2	5.1	11.0	---	---	30.0	4	35	---	6.0
5.	3.1	---	17.0	---	---	25.0	4	25	---	---
6.	3.1	---	26.0	---	---	27.0	4	25	---	---
7.	3.2	---	12.0	---	---	11.0	5	5	---	---
8.	3.5	5.1	21.0	---	---	30.0	4	18	---	---
9.	3.5	5.1	28.0	---	---	26.0	4	0	---	6.0
10.	3.6	5.6	42.0	---	---	41.0	4	0	---	10.0
11.	3.6	5.2	34.0	---	---	48.0	4	0	---	5.0
12.	3.4	5.1	30.0	---	---	46.0	4	0	---	7.0
13.	3.5	5.2	35.0	---	---	37.0	5	50	---	3.0
14.	3.5	---	39.0	---	---	29.0	4	15	---	16.0
15.	3.8	5.6	49.0	---	---	37.0	4	15	---	12.0
16.	3.4	---	17.0	---	---	19.0	4	10	---	12.0
17.	3.7	---	16.0	---	---	23.0	4	2	---	---
18.	3.6	5.0	22.0	---	---	53.0	4	5	---	7.5
19.	3.4	---	21.0	---	---	12.0	4	60	---	---
20.	3.4	5.7	27.0	---	---	32.0	4	15	---	6.0

TABLE IV.

Artemisia tridentata Study Area Demer Date 18 August 1976

PLANT NO.	PHENO. STAGE SCORE VEG.	PHENO. STAGE SCORE REPR.	PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
1.	3.4	6.3	24.5	---	---	26.0	4	5	---	1.5
2.	3.4	5.9	25.0	---	---	27.0	4	0	---	5.5
3.	3.5	5.1	16.5	---	---	15.0	5	80	---	2.2
4.	3.7	---	14.0	---	---	30.0	4	35	---	6.0
5.	3.5	---	19.0	---	---	25.0	4	25	---	---
6.	3.7	---	28.0	---	---	27.0	4	25	---	---
7.	3.5	---	9.0	---	---	11.0	5	5	---	---
8.	3.6	6.3	27.5	---	---	30.0	4	18	---	7.0
9.	3.7	6.4	28.5	---	---	26.0	4	0	---	10.0
10.	3.8	6.5	38.0	---	---	41.0	4	0	---	7.9
11.	3.9	6.5	32.5	---	---	48.0	4	0	---	9.2
12.	3.6	6.3	26.0	---	---	46.0	4	0	---	3.0
13.	3.5	5.9	31.0	---	---	37.0	5	50	---	5.5
14.	3.8	---	38.0	---	---	29.0	4	15	---	16.0
15.	3.8	6.4	46.0	---	---	37.0	4	15	---	10.4
16.	3.4	---	10.0	---	---	19.0	4	10	---	12.0
17.	3.7	---	15.0	---	---	23.0	4	2	---	---
18.	3.8	6.1	26.0	---	---	53.0	4	5	---	8.5
19.	3.6	---	18.0	---	---	12.0	4	60	---	---
20.	3.5	6.4	26.5	---	---	32.0	4	15	---	6.3

TABLE IV.

Artemisia tridentata Study Area Demer Date 30 October 1976

PLANT NO.	PHENO. STAGE SCORE.		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	14.1	---	24.5	---	---	26.0	4	35	.7	1.5
2.	14.2	15.1	25.0	---	---	27.0	4	5	1.2	5.5
3.	14.7	---	16.5	---	---	15.0	5	85	.5	2.2
4.	14.2	15.1	14.0	---	---	30.0	4	35	1.5	6.0
5.	14.1	---	19.0	---	---	25.0	4	30	2.5	---
6.	14.1	13.9	28.0	---	---	27.0	4	10	1.5	---
7.	14.8	---	9.0	---	---	11.0	5	55	1.3	---
8.	14.9	15.1	27.5	---	---	30.0	4	45	2.2	7.0
9.	14.5	15.1	28.5	---	---	26.0	4	10	3.0	10.0
10.	14.8	13.9	38.0	---	---	41.0	4	5	2.7	7.9
11.	14.8	15.2	32.5	---	---	48.0	4	5	2.7	9.2
12.	14.9	13.9	26.0	---	---	46.0	4	5	2.0	3.0
13.	14.9	13.9	31.0	---	---	37.0	5	85	1.6	5.5
14.	4.9	---	38.0	---	---	29.0	4	50	2.5	16.0
15.	14.7	13.9	46.0	---	---	37.0	4	30	4.5	10.4
16.	14.9	---	10.0	---	---	19.0	4	5	.8	12.0
17.	14.9	---	15.0	---	---	23.0	4	10	2.1	---
18.	14.8	13.9	26.0	---	---	53.0	4	5	2.0	8.5
19.	14.9	---	18.0	---	---	12.0	4	75	1.7	---
20.	14.8	13.9	26.5	---	---	32.0	4	30	1.6	6.3

TABLE IV.

Artemisia tridentata Study Area Farson Date 25 May 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	2.5	---	19.4	---	---	---	---	15	---	---
2.	2.0	---	16.2	---	---	---	---	5	---	---
3.	2.0	---	30.8	---	---	---	---	25	---	---
4.	2.0	---	18.5	---	---	---	---	35	---	---
5.	2.0	---	30.5	---	---	---	---	55	---	---
6.	2.0	---	25.5	---	---	---	---	10	---	---
7.	2.0	---	11.6	---	---	---	---	12	---	---
8.	2.0	---	32.0	---	---	---	---	5	---	---
9.	2.0	---	18.2	---	---	---	---	2	---	---
10.	2.0	---	17.0	---	---	---	---	45	---	---
11.	2.1	---	30.0	---	---	---	---	15	---	---
12.	2.1	---	36.2	---	---	---	---	0	---	---
13.	2.0	---	23.2	---	---	---	---	12	---	---
14.	2.0	---	26.0	---	---	---	---	15	---	---
15.	2.0	---	18.1	---	---	---	---	5	---	---
16.	2.0	---	12.4	---	---	---	---	0	---	---
17.	2.0	---	22.5	---	---	---	---	2	---	---
18.	1.0	---	15.0	---	---	---	---	70	---	---
19.	2.0	---	23.8	---	---	---	---	5	---	---
20.	2.0	---	16.0	---	---	---	---	12	---	---

TABLE IV.

Artemisia tridentata Study Area Farson Date 1 July 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	3.2	---	19.0	---	---	---	---	15	---	---
2.	3.1	---	11.0	---	---	---	---	5	---	---
3.	3.2	5.1	31.0	---	---	---	---	25	---	4.0
4.	2.9	---	18.8	---	---	---	---	35	---	---
5.	3.2	---	31.0	---	---	---	---	55	---	---
6.	2.9	5.2	26.5	---	---	---	---	10	---	5.5
7.	2.8	---	10.5	---	---	---	---	12	---	---
8.	2.8	---	27.0	---	---	---	---	5	---	---
9.	2.8	---	16.5	---	---	---	---	2	---	---
10.	2.7	---	16.3	---	---	---	---	45	---	---
11.	3.5	5.1	30.5	---	---	---	---	15	---	8.4
12.	3.2	5.3	32.0	---	---	---	---	0	---	8.2
13.	2.9	5.1	21.0	---	---	---	---	12	---	4.8
14.	3.1	5.3	17.5	---	---	---	---	15	---	10.0
15.	2.9	---	18.5	---	---	---	---	5	---	---
16.	3.1	---	13.2	---	---	---	---	0	---	---
17.	3.0	5.1	21.5	---	---	---	---	2	---	5.0
18.	3.1	---	14.4	---	---	---	---	70	---	---
19.	3.8	---	22.4	---	---	---	---	5	---	---
20.	3.1	---	15.5	---	---	---	---	12	---	---

TABLE IV.

Artemisia tridentata Study Area Farson Date 3 August 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PERCENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	3.4	---	21.0	---	---	33.0	4	15	---	---
2.	3.4	---	10.0	---	---	30.0	4	5	---	---
3.	3.4	5.0	35.0	---	---	44.0	4	25	---	3.5
4.	3.3	---	18.0	---	---	20.0	4	35	---	---
5.	3.5	---	32.0	---	---	77.0	4	55	---	---
6.	3.3	5.4	25.0	---	---	37.0	4	10	---	5.5
7.	3.3	---	14.0	---	---	13.0	4	12	---	---
8.	3.3	---	31.0	---	---	45.0	4	5	---	---
9.	3.3	---	17.0	---	---	23.0	4	2	---	---
10.	3.4	---	19.0	---	---	26.0	4	45	---	---
11.	3.3	5.1	32.0	---	---	38.0	4	15	---	8.5
12.	3.5	5.1	24.0	---	---	53.0	4	0	---	10.0
13.	3.3	5.0	19.0	---	---	21.0	4	12	---	4.0
14.	3.9	5.5	31.0	---	---	30.0	4	15	---	11.5
15.	3.3	---	21.0	---	---	22.0	4	5	---	---
16.	3.6	---	18.0	---	---	21.0	4	0	---	---
17.	3.5	5.1	25.0	---	---	37.0	4	2	---	5.0
18.	3.5	---	18.0	---	---	30.0	4	70	---	---
19.	3.6	---	22.0	---	---	18.0	4	5	---	---
20.	3.5	---	17.0	---	---	27.0	4	12	---	---

TABLE IV.

Artemisia tridentata Study Area Farson Date 18 August 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm	
	VEG.	REPR.									
1.	3.9	---	18.0	---	---	33.0	4	15	---	---	
2.	3.7	---	19.0	---	---	30.0	4	5	---	---	
3.	3.8	5.4	36.0	---	---	44.0	4	25	---	4.5	
4.	3.6	---	19.0	---	---	20.0	4	35	---	---	
5.	3.7	---	35.0	---	---	77.0	4	55	---	---	Dying
6.	3.5	5.4	32.0	---	---	37.0	4	10	---	5.0	
7.	3.5	---	12.0	---	---	13.0	4	12	---	---	
8.	3.8	---	32.0	---	---	45.0	4	5	---	---	
9.	3.8	---	22.0	---	---	23.0	4	2	---	---	
10.	3.7	---	17.0	---	---	26.0	4	45	---	---	
11.	4.0	5.9	32.0	---	---	38.0	4	15	---	10.0	
12.	3.9	5.7	32.0	---	---	53.0	4	0	---	9.0	
13.	3.8	5.5	18.0	---	---	21.0	4	12	---	4.0	
14.	4.2	5.9	27.0	---	---	30.0	4	15	---	12.0	
15.	3.8	---	16.0	---	---	22.0	4	15	---	---	
16.	3.8	---	16.0	---	---	21.0	4	0	---	---	
17.	4.0	5.4	25.0	---	---	37.0	4	2	---	5.0	
18.	3.4	---	16.0	---	---	30.0	4	70	---	---	
19.	3.4	---	22.0	---	---	18.0	4	5	---	---	
20.	3.8	---	16.0	---	---	27.0	4	12	---	---	

TABLE IV.

Artemisia tridentata Study Area Farson Date 18 September 1976

PLANT NO.	PHENO. STAGE VEG.	PHENO. SCORE REPR.	PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
1.	4.6	---	18.0	---	---	33.0	4	15	1.5	---
2.	4.3	---	19.0	---	---	30.0	4	5	0.5	---
3.	4.5	9.5	36.0	---	---	44.0	4	25	0.5	4.0
4.	4.5	---	19.0	---	---	20.0	4	35	0.5	---
5.	4.6	---	35.0	---	---	77.0	4	55	1.0	---
6.	4.6	9.2	32.0	---	---	37.0	4	10	1.0	5.0
7.	4.2	---	12.0	---	---	13.0	4	12	0.5	---
8.	4.7	---	32.0	---	---	45.0	4	5	1.0	---
9.	4.5	---	22.0	---	---	23.0	4	2	1.5	---
10.	4.7	---	17.0	---	---	26.0	4	45	1.5	---
11.	4.3	11.5	32.0	---	---	38.0	4	15	1.5	8.0
12.	4.3	9.5	32.0	---	---	53.0	4	0	2.0	5.0
13.	4.5	9.2	18.0	---	---	21.0	4	12	1.0	4.0
14.	4.4	9.1	27.0	---	---	30.0	4	15	2.5	6.0
15.	4.5	---	16.0	---	---	22.0	4	5	0.5	---
16.	4.5	---	16.0	---	---	21.0	4	0	0.5	---
17.	4.2	9.1	25.0	---	---	37.0	4	2	1.0	5.0
18.	4.5	---	16.0	---	---	30.0	4	70	0.5	---
19.	4.2	---	22.0	---	---	18.0	4	5	1.0	---
20.	4.2	---	16.0	---	---	27.0	4	12	0.5	---

TABLE IV.

Artemisia tridentata Study Area Farson Date 6 November 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	14.3	---	18.0	---	---	33.0	4	50	1.5	---
2.	14.4	---	19.0	---	---	30.0	4	35	0.5	---
3.	14.2	15.2	36.0	---	---	44.0	4	30	0.5	4.0
4.	14.3	---	19.0	---	---	20.0	4	35	0.5	---
5.	14.5	---	35.0	---	---	77.0	4	75	1.0	---
6.	14.1	15.3	32.0	---	---	37.0	4	35	1.0	5.0
7.	14.2	---	12.0	---	---	13.0	4	15	0.5	---
8.	14.4	---	32.0	---	---	45.0	4	15	1.0	---
9.	14.1	---	22.0	---	---	23.0	4	15	1.5	---
10.	14.2	---	17.0	---	---	26.0	4	65	1.5	---
11.	14.1	15.4	32.0	---	---	38.0	4	30	1.5	8.0
12.	14.1	15.6	32.0	---	---	53.0	4	5	2.0	5.0
13.	14.1	15.3	18.0	---	---	21.0	4	10	1.0	4.0
14.	14.1	15.5	27.0	---	---	30.0	4	20	2.5	6.0
15.	14.2	---	16.0	---	---	22.0	4	45	0.5	---
16.	14.1	---	16.0	---	---	21.0	4	5	0.5	---
17.	14.0	15.4	25.0	---	---	37.0	4	10	1.0	5.0
18.	14.3	---	16.0	---	---	30.0	4	80	0.5	---
19.	14.1	---	22.0	---	---	18.0	4	30	1.0	---
20.	14.3	---	16.0	---	---	27.0	4	15	0.5	---

TABLE IV.

Artemisia tridentata

Study Area Horse Creek

Date 2 June 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	2.5	---	41.0	---	---	---	---	65	---	---
2.	2.2	---	16.0	---	---	---	---	50	---	---
3.	2.6	---	21.0	---	---	---	---	80	---	---
4.	2.8	---	59.5	---	---	---	---	15	---	---
5.	2.2	---	12.0	---	---	---	---	5	---	---
6.	2.8	---	16.0	---	---	---	---	30	---	---
7.	2.2	---	56.0	---	---	---	---	20	---	---
8.	2.7	---	41.0	---	---	---	---	30	---	---
9.	2.8	---	25.5	---	---	---	---	50	---	---
10.	2.0	---	11.5	---	---	---	---	90	---	---
11.	3.2	---	29.0	---	---	---	---	10	---	---
12.	2.5	---	16.0	---	---	---	---	25	---	---
13.	2.8	---	16.5	---	---	---	---	5	---	---
14.	2.8	---	38.0	---	---	---	---	55	---	---
15.	3.0	---	25.0	---	---	---	---	0	---	---
16.	2.9	---	51.0	---	---	---	---	35	---	---
17.	1.0	---	---	---	---	---	---	---	---	---
18.	2.0	---	24.0	---	---	---	---	90	---	---
19.	2.8	---	13.0	---	---	---	---	80	---	---
20.	2.4	---	20.0	---	---	---	---	85	---	---

TABLE IV.

Artemisia tridentata Study Area Horse Creek Date 2 July 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	3.1	5.3	41.0	---	---	---	---	65	---	9.2
2.	3.1	5.2	16.0	---	---	---	---	50	---	6.5
3.	2.7	5.2	21.0	---	---	---	---	80	---	5.2
4.	3.0	5.3	59.5	---	---	---	---	15	---	9.0
5.	3.0	---	12.0	---	---	---	---	5	---	---
6.	2.8	---	16.0	---	---	---	---	30	---	---
7.	3.0	5.3	56.0	---	---	---	---	20	---	8.8
8.	2.8	---	41.0	---	---	---	---	30	---	---
9.	2.6	---	25.5	---	---	---	---	50	---	---
10.	2.5	---	11.5	---	---	---	---	90	---	---
11.	3.0	5.3	29.0	---	---	---	---	10	---	10.9
12.	2.9	---	16.0	---	---	---	---	25	---	---
13.	3.2	---	16.5	---	---	---	---	5	---	---
14.	3.0	5.3	38.0	---	---	---	---	55	---	8.5
15.	3.2	---	25.0	---	---	---	---	0	---	---
16.	3.2	5.3	51.0	---	---	---	---	35	---	11.5
17.	3.1	5.3	---	---	---	---	---	---	---	11.0
18.	2.8	---	24.0	---	---	---	---	90	---	---
19.	3.0	5.3	13.0	---	---	---	---	80	---	9.7
20.	2.8	5.2	20.0	---	---	---	---	85	---	3.5

TABLE IV.

Artemisia tridentata Study Area Horse Creek Date 29 July 1976

PLANT NO.	PHENO. STAGE SCORE VEG.	REPR.	PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
1.	3.4	5.4	41.0	---	---	27.0	4	65	---	8.5
2.	3.6	5.5	16.0	---	---	42.5	4	50	---	6.0
3.	3.2	5.2	21.0	---	---	12.0	4	80	---	3.0
4.	3.6	5.8	59.5	---	---	50.0	4	15	---	9.0
5.	3.8	---	12.0	---	---	18.0	3	5	---	---
6.	3.5	---	16.0	---	---	13.0	4	30	---	---
7.	3.8	5.8	56.0	---	---	55.0	4	20	---	9.0
8.	3.2	---	41.0	---	---	10.5	4	30	---	---
9.	3.8	---	25.5	---	---	50.0	4	50	---	---
10.	3.4	---	11.5	---	---	4.5	4	90	---	---
11.	3.9	5.9	29.0	---	---	40.5	4	10	---	11.0
12.	3.5	---	16.0	---	---	14.0	4	25	---	---
13.	3.9	---	16.5	---	---	22.0	4	5	---	---
14.	4.0	5.8	38.0	---	---	49.0	4	55	---	9.0
15.	4.0	---	25.0	---	---	17.0	4	0	---	---
16.	3.9	5.9	51.0	---	---	28.0	4	35	---	13.0
17.	------	-------	--------	--------	-- Died	--------	-------	-------	--------	------
18.	3.2	---	24.0	---	---	9.0	4	90	---	---
19.	3.6	5.5	13.0	---	---	9.5	4	80	---	9.5
20.	3.4	---	20.0	---	---	13.0	4	85	---	---

TABLE IV.

Artemisia tridentata Study Area Horse Creek Date 18 August 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	3.7	6.2	35.0	---	---	27.0	4	65	---	11.7
2.	3.6	6.3	29.0	---	---	42.5	4	50	---	8.5
3.	3.5	6.3	14.0	---	---	12.0	4	80	---	5.4
4.	3.7	6.5	55.0	---	---	50.0	4	15	---	9.5
5.	3.8	---	12.0	---	---	18.0	3	5	---	---
6.	3.6	---	17.5	---	---	13.0	4	30	---	---
7.	3.8	13.3	49.5	---	---	53.0	4	20	---	15.7
8.	3.7	6.1	40.0	---	---	10.5	4	30	---	11.2
9.	3.5	---	27.0	---	---	50.0	4	50	---	---
10.	3.6	---	13.0	---	---	4.5	4	90	---	---
11.	3.7	6.3	23.5	---	---	40.5	4	10	---	11.0
12.	3.5	---	15.5	---	---	14.0	4	25	---	---
13.	3.9	---	28.0	---	---	22.0	4	5	---	---
14.	3.7	6.5	40.0	---	---	49.0	4	55	---	9.2
15.	3.8	---	24.5	---	---	17.0	4	0	---	---
16.	3.7	6.4	41.0	---	---	28.0	4	35	---	13.0
17.	3.8	6.2	63.5	New Plant --			---	---	---	11.5
18.	3.6	5.8	24.0	---	---	9.0	4	90	---	1.5
19.	3.7	6.2	12.0	---	---	9.5	4	80	---	10.0
20.	3.6	6.1	22.0	---	---	13.0	4	85	---	4.0

TABLE IV.

Artemisia tridentata Study Area Horse Creek Date 19 September 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm	
	VEG.	REPR.									
1.	4.7	7.1	35.0	---	---	27.0	4	60	---	11.7	
2.	4.5	6.5	29.0	---	---	42.5	4	80	---	8.5	
3.	4.6	6.9	14.0	---	---	12.0	4	95	---	5.4	
4.	4.6	8.2	55.0	---	---	50.0	4	20	---	9.5	
5.	4.4	---	12.0	---	---	18.0	3	5	---	---	
6.	4.5	---	17.5	---	---	13.0	4	40	---	---	
7.	4.7	7.8	49.5	---	---	55.0	4	25	---	15.7	
8.	4.6	7.4	40.0	---	---	10.5	4	40	---	11.2	
9.	14.1	---	27.0	---	---	50.0	4	50	---	---	
10.	4.8	---	13.0	---	---	4.5	4	99	---	---	
11.	4.7	8.4	23.5	---	---	40.5	4	12	---	11.0	
12.	4.8	---	15.5	---	---	14.0	4	25	---	---	
13.	4.8	---	28.0	---	---	22.0	4	9	---	---	
14.	4.5	6.9	40.0	---	---	49.0	4	60	---	9.2	
15.	4.9	---	24.5	---	---	17.0	4	5	---	---	
16.	4.8	7.1	41.0	---	---	28.0	4	5	---	13.0	
17.	4.7	6.4	63.5	---	---	---	---	90	---	11.5	
18.	14.2	---	24.0	---	---	9.0	4	95	---	---	
19.	14.0	7.3	12.0	---	---	9.5	4	90	---	10.0	
20.	4.6	6.3	22.0	---	---	13.0	4	85	---	4.0	

TABLE IV.

Artemisia tridentata Study Area Horse Creek Date 31 October 1976

PLANT NO.	PHENO. STAGE	PHENO. SCORE	PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	14.1	9.8	35.0	---	---	27.0	4	60	1.8	10.0
2.	14.1	---	29.0	---	---	42.5	4	80	3.2	---
3.	14.6	10.0	14.0	---	---	12.0	4	95	0.5	5.5
4.	14.1	9.5	55.0	---	---	50.0	4	20	2.5	9.0
5.	14.1	---	12.0	---	---	18.0	3	5	2.1	---
6.	14.2	---	17.5	---	---	13.0	4	40	0.7	---
7.	14.2	9.8	49.5	---	---	55.0	4	25	2.2	3.7
8.	14.3	---	40.0	---	---	10.5	4	40	1.2	---
9.	14.6	---	27.0	---	---	50.0	4	50	0.7	---
10.	14.2	---	13.0	---	---	4.5	4	99	1.1	---
11.	14.0	9.8	23.5	---	---	40.5	4	12	1.8	11.1
12.	14.0	---	15.5	---	---	14.0	4	25	1.5	---
13.	14.0	---	28.0	---	---	22.0	4	9	4.2	---
14.	14.2	9.8	40.0	---	---	49.0	4	60	4.0	8.7
15.	14.1	---	24.5	---	---	17.0	4	5	2.9	---
16.	14.3	9.7	41.0	---	---	28.0	4	5	2.5	12.2
17.	14.1	9.8	63.5	---	---	---	---	90	4.5	12.2
18.	14.8	---	24.0	---	---	9.0	4	95	0.7	---
19.	14.4	9.8	12.0	---	---	9.5	4	90	2.0	9.7
20.	14.1	9.8	22.0	---	---	13.0	4	85	1.7	4.0

TABLE IV.

Artemisia tridentata   Study Area Mesa Antelope   Date 4 June 1976

PLANT NO.	PHENO. STAGE SCORE VEG.	REPR.	PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm	
1.	2.7	---	16.5	---	---	---	---	5	---	---	
2.	2.6	---	15.5	---	---	---	---	10	---	---	
3.	2.7	---	32.5	---	---	---	---	5			
4.	2.7	---	13.0	---	---	---	---	55	---	---	
5.	2.6	---	25.5	---	---	---	---	0	---	---	
6.	2.6	---	24.0	---	---	---	---	0	---	---	
7.	2.4	---	19.5	---	---	---	---	0	---	---	
8.	2.9	---	26.5	---	---	---	---	0	---	---	
9.	2.7	---	27.0	---	---	---	---	5	---	---	
10.	2.8	---	17.5	---	---	---	---	0	---	---	
11.	2.8	---	11.5	---	---	---	---	5	---	---	
12.	2.9	---	22.5	---	---	---	---	30	---	---	
13.	2.5	---	25.0	---	---	---	---	10	---	---	
14.	2.5	---	25.0	---	---	---	---	30	---	---	
15.	2.3	---	12.5	---	---	---	---	5	---	---	
16.	2.7	---	18.0	---	---	---	---	5	---	---	
17.	2.7	---	15.0	---	---	---	---	25	---	---	
18.	2.6	---	17.0	--	---	---	---	5	---	---	
19.	2.8	---	23.0	---	---	---	---	10	---	---	
20.	2.6	---	14.0	---	---	---	---	10	---	---	

TABLE IV.

Artemisia tridentata　　Study Area Mesa Antelope　　Date 13 July 1976

PLANT NO.	PHENO. STAGE	SCORE	PLANT HGHT.	PLANT LNGTH.	PLANT WIDTH	PLANT DIAM.	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH.	NEW SEED STALK LNGTH
	VEG.	REPR.	cm	cm	cm	cm			cm	cm
1.	3.5	5.1	16.5	---	---	---	---	5	---	6.0
2.	3.2	5.3	15.5	---	---	---	---	10	---	7.0
3.	3.2	5.3	32.5	---	---	---	---	5	---	9.5
4.	3.2	---	13.0	---	---	---	---	55	---	---
5.	3.5	5.3	25.5	---	---	---	---	0	---	12.0
6.	3.3	5.4	24.0	---	---	---	---	0	---	13.0
7.	3.2	5.2	19.5	---	---	---	---	0	---	7.0
8.	3.3	5.2	26.5	---	---	---	---	0	---	7.0
9.	3.3	5.3	27.0	---	---	---	---	5	---	9.0
10.	3.2	5.3	17.5	---	---	---	---	0	10.0	
11.	3.4	---	11.5	---	---	---	---	5	---	---
12.	3.2	---	22.5	---	---	---	---	30	---	---
13.	3.0	---	25.0	---	---	---	---	10	---	---
14.	3.3	---	25.0	---	---	---	---	30	---	---
15.	2.9	---	12.5	---	---	---	---	5	---	---
16.	3.2	5.2	18.0	---	---	---	---	5	---	8.0
17.	3.4	---	15.0	---	---	---	---	25	---	---
18.	3.1	5.1	17.0	---	---	---	---	5	---	5.0
19.	3.2	5.2	23.0	---	---	---	---	10	---	9.5
20.	3.1	5.1	14.0	---	---	---	---	10	---	9.0

TABLE IV.

Artemisia tridentata Study Area Mesa Antelope Date 3 August 1976

PLANT NO.	PHENO. STAGE SCORE.		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	4.1	---	16.5	---	---	45.0	4	5	---	---
2.	4.2	5.9	15.5	---	---	58.0	4	10	---	11.0
3.	4.1	6.0	32.5	---	---	50.0	4	5	---	9.5
4.	4.2	---	13.0	---	---	17.5	4	55	---	---
5.	3.8	---	25.5	---	---	30.0	4	0	---	---
6.	4.0	6.0	24.0	---	---	37.0	4	0	---	14.0
7.	3.9	5.6	19.5	---	---	38.0	4	0	---	7.5
8.	3.7	5.8	26.5	---	---	16.0	2	0	---	7.0
9.	3.9	5.6	27.0	---	---	39.0	4	5	---	6.5
10.	3.6	---	17.5	---	---	20.0	2	0	---	---
11.	3.5	---	11.5	---	---	31.0	4	5	---	---
12.	4.0	---	22.5	---	---	26.0	4	30	---	---
13.	3.9	---	25.0	---	---	31.0	4	10	---	---
14.	3.9	---	25.0	---	---	55.0	4	30	---	---
15.	3.6	---	12.5	---	---	19.0	3	5	---	---
16.	3.7	5.2	18.0	---	---	22.0	4	5	---	9.0
17.	3.4	---	15.0	---	---	43.0	4	25	---	---
18.	3.4	---	17.0	---	---	27.0	4	5	---	---
19.	3.4	---	23.0	---	---	49.0	4	10	---	---
20.	3.5	5.4	14.0	---	---	23.0	4	10	---	7.5

TABLE IV.

Artemisia tridentata Study Area Mesa Antelope Date 18 September 1976

PLANT NO.	PHENO. STAGE SCORE VEG.	REPR.	PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
1.	14.0	9.9	21.0	---	---	45.0	4	5	2.0	6.5
2.	4.9	10.4	30.0	---	---	58.0	4	10	2.0	7.0
3.	14.0	10.1	37.0	---	---	50.0	4	5	2.5	7.5
4.	14.0	---	13.0	---	---	17.5	4	55	2.0	---
5.	4.8	---	15.0	---	---	30.0	4	0	1.0	---
6.	4.9	10.3	35.0	---	---	37.0	4	0	3.0	12.0
7.	4.8	10.8	25.0	---	---	38.0	4	0	2.5	8.0
8.	4.9	11.1	30.0	---	---	16.0	2	0	2.5	8.0
9.	4.9	11.7	32.0	---	---	39.0	4	5	2.5	8.0
10.	4.8	---	20.5	---	---	20.0	2	0	2.0	---
11.	14.0	---	17.0	---	---	31.0	4	5	2.5	---
12.	4.9	---	25.0	---	---	26.0	4	30	2.5	---
13.	14.0	---	24.0	---	---	31.0	4	10	1.5	---
14.	4.9	---	25.0	---	---	55.0	4	30	1.5	---
15.	4.7	---	11.0	---	---	19.0	3	5	1.0	---
16.	4.9	9.9	20.0	---	---	22.0	4	5	2.0	9.0
17.	4.8	---	22.0	---	---	43.0	4	25	2.5	---
18.	4.8	---	21.0	---	---	27.0	4	5	3.0	---
19.	4.9	7.5	23.0	---	---	49.0	4	10	2.0	10.0
20.	4.9	---	17.0	---	---	23.0	4	10	2.0	---

TABLE IV.

Artemisia tridentata Study Area Mesa Antelope Date 7 November 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	14.2	15.2	21.0	---	---	45.0	4	5	2.0	6.5
2.	14.3	13.9	30.0	---	---	58.0	4	10	2.0	7.0
3.	14.2	15.1	37.0	---	---	50.0	4	5	2.5	7.5
4.	14.6	---	13.0	---	---	17.5	4	55	2.0	---
5.	14.4	---	15.0	---	---	30.0	4	0	1.0	---
6.	14.2	15.1	35.0	---	---	37.0	4	0	3.0	12.0
7.	14.7	15.2	25.0	---	---	38.0	4	0	2.5	8.0
8.	14.3	15.4	30.0	---	---	16.0	2	0	2.5	8.0
9.	14.4	15.4	32.0	---	---	39.0	4	5	2.5	8.0
10.	14.5	15.5	20.5	---	---	20.0	2	0	2.0	8.5
11.	14.4	---	17.0	---	---	31.0	4	5	2.5	---
12.	14.7	15.6	25.0	---	---	26.0	4	30	2.5	9.1
13.	14.7	---	24.0	---	---	31.0	4	10	1.5	---
14.	14.7	---	25.0	---	---	55.0	4	30	1.5	---
15.	14.7	---	11.0	---	---	19.0	3	5	1.0	---
16.	14.6	15.6	20.0	---	---	22.0	4	5	2.0	9.0
17.	14.7	---	22.0	---	---	43.0	4	25	2.5	---
18.	14.8	---	21.0	---	---	27.0	4	5	3.0	---
19.	14.6	15.6	23.0	---	---	49.0	4	10	2.0	10.0
20.	14.7	---	17.0	---	---	23.0	4	10	2.0	---

TABLE IV.

Artemisia tridentata

Study Area Owl Draw

Date 1 June 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	3.3	---	43.0	---	---	---	---	5	---	---
2.	3.0	---	39.5	---	---	---	---	10	---	---
3.	2.8	---	29.0	---	---	---	---	50	---	---
4.	3.0	---	14.5	---	---	---	---	40	---	---
5.	3.1	---	18.0	---	---	---	---	5	---	---
6.	2.7	---	40.0	---	---	---	---	20	---	---
7.	2.9	---	9.8	---	---	---	---	0	---	---
8.	2.0	---	22.8	---	---	---	---	0	---	---
9.	3.0	---	48.5	---	---	---	---	5	---	---
10.	2.9	---	9.0	---	---	---	---	0	---	---
11.	3.2	---	40.5	---	---	---	---	30	---	---
12.	3.4	---	60.0	---	---	---	---	5	---	---
13.	2.5	---	11.0	---	---	---	---	5	---	---
14.	2.9	---	48.5	---	---	---	---	5	---	---
15.	2.7	---	30.0	---	---	---	---	75	---	---
16.	2.8	---	8.5	---	---	---	---	0	---	---
17.	2.5	---	7.9	---	---	---	---	5	---	---
18.	3.3	---	17.0	---	---	---	---	45	---	---
19.	2.8	---	11.0	---	---	---	---	40	---	---
20.	3.0	---	22.0	---	---	---	---	30	---	---

TABLE IV.

Artemisia tridentata Study Area Owl Draw Date 12 July 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	3.7	5.8	43.0	---	---	---	---	5	---	17.5
2.	3.6	5.2	39.5	---	---	---	---	10	---	5.3
3.	3.7	5.3	29.0	---	---	---	---	50	---	9.9
4.	3.6	---	14.5	---	---	---	---	40	---	---
5.	3.5	---	18.0	---	---	---	---	5	---	---
6.	3.6	5.4	40.0	---	---	---	---	20	---	10.5
7.	3.4	---	9.8	---	---	---	---	0	---	---
8.	3.4	5.1	22.8	---	---	---	---	0	---	3.0
9.	3.6	5.3	48.5	---	---	---	---	5	---	14.5
10.	3.3	---	9.0	---	---	---	---	0	---	---
11.	3.7	---	40.5	---	---	---	---	30	---	---
12.	3.6	5.4	60.0	---	---	---	---	5	---	14.2
13.	3.5	---	11.0	---	---	---	---	5	---	---
14.	3.6	5.5	48.5	---	---	---	---	5	---	13.3
15.	3.5	---	30.0	---	---	---	---	75	---	---
16.	3.5	---	8.5	---	---	---	---	0	---	---
17.	3.4	---	7.9	---	---	---	---	5	---	---
18.	3.4	---	17.0	---	---	---	---	45	---	---
19.	3.5	---	11.0	---	---	---	---	40	---	---
20.	3.7	5.4	22.0	---	---	---	---	30	---	10.5

TABLE IV.

Artemisia tridentata Study Area Owl Draw Date 26 July 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	3.9	5.9	43.0	---	---	65.0	4	5	---	16.5
2.	3.7	5.4	39.5	---	---	56.0	4	10	---	6.0
3.	3.7	5.4	29.0	---	---	20.0	4	50	---	12.0
4.	3.6	---	14.5	---	---	10.0	3	40	---	---
5.	3.7	---	18.0	---	---	24.0	3	5	---	---
6.	3.3	5.6	40.0	---	---	24.0	3	20	---	10.0
7.	3.3	---	9.8	---	---	4.0	2	0	---	---
8.	3.2	5.7	22.8	---	---	25.0	3	0	---	4.0
9.	3.7	5.5	48.5	---	---	68.0	4	5	---	14.0
10.	3.1	---	9.0	---	---	8.0	2	0	---	---
11.	3.9	---	40.5	---	---	68.0	4	30	---	---
12.	3.8	5.7	60.0	---	---	50.0	4	5	---	13.0
13.	3.8	---	11.0	---	---	1.5	2	5	---	---
14.	3.7	5.9	48.5	---	---	58.0	4	5	---	11.5
15.	3.4	---	30.0	---	---	22.0	4	75	---	---
16.	3.2	---	8.5	---	---	9.0	2	0	---	---
17.	3.5	---	7.9	---	---	4.0	2	5	---	---
18.	3.8	---	17.0	---	---	8.0	2	45	---	---
19.	3.5	---	11.0	---	---	8.0	2	40	---	---
20.	3.4	5.6	22.0	---	---	36.0	4	30	---	11.0

TABLE IV.

Artemisia tridentata   Study Area Owl Draw   Date 21 August 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	3.8	6.3	49.0	---	---	65.0	4	5	---	18.0
2.	3.7	5.8	44.0	---	---	56.0	4	10	---	5.4
3.	3.8	5.9	18.0	---	---	20.0	4	50	---	14.0
4.	3.6	---	5.0	---	---	10.0	3	40	---	---
5.	3.8	---	24.5	---	---	24.0	3	5	---	---
6.	3.6	6.3	25.0	---	---	24.0	3	20	---	11.6
7.	3.5	---	6.0	---	---	4.0	2	0	---	---
8.	3.7	5.8	21.0	---	---	25.0	3	0	---	3.2
9.	3.8	6.2	49.5	---	---	68.0	4	5	---	16.5
10.	3.5	---	9.5	---	---	8.0	2	0	---	---
11.	3.8	---	41.0	---	---	68.0	4	30	---	---
12.	3.8	6.2	57.5	---	---	50.0	4	5	---	14.0
13.	3.8	---	13.0	---	---	1.5	2	5	---	---
14.	3.8	6.4	48.0	---	---	58.0	4	5	---	14.0
15.	3.7	---	21.0	---	---	22.0	4	75	---	---
16.	3.6	---	10.0	---	---	9.0	2	0	---	---
17.	3.6	---	8.0	---	---	4.0	2	5	---	---
18.	3.8	---	14.0	---	---	8.0	2	45	---	---
19.	3.7	---	11.5	---	---	8.0	2	40	---	---
20.	3.8	6.2	30.0	---	---	36.0	4	30	---	11.5

TABLE IV.

Artemisia tridentata Study Area Owl Draw Date 29 October 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT.	PLANT LNGTH.	PLANT WIDTH	PLANT DIAM.	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH.	NEW SEED STALK LNGTH	
	VEG.	REPR.	cm	cm	cm	cm			cm	cm	
1.	14.9	15.1	49.0	---	---	65.0	4	2	4.5	18.0	
2.	14.9	15.0	44.0	---	---	56.0	4	15	4.2	5.4	
3.	14.9	13.3	18.0	---	---	20.0	4	45	2.5	14.0	
4.	14.9	---	5.0	---	---	10.0	3	40	2.8	---	
5.	14.9	---	24.5	---	---	24.0	3	5	3.5	---	Browsed
6.	14.9	13.8	25.0	---	---	24.0	3	10	1.3	11.6	
7.	14.9	---	6.0	---	---	4.0	2	20	2.0	---	
8.	14.9	15.1	21.0	---	---	25.0	3	5	1.2	3.2	
9.	14.9	13.8	49.5	---	---	68.0	4	5	2.7	16.5	
10.	14.9	---	9.5	---	---	8.0	2	10	0.5	---	
11.	14.9	---	41.0	---	---	68.0	4	20	3.3	---	
12.	14.9	15.1	57.5	---	---	50.0	4	10	3.2	14.0	
13.	14.9	---	13.0	---	---	1.5	2	5	3.0	---	
14.	14.9	15.2	48.0	---	---	58.0	4	5	3.0	14.0	
15.	14.9	---	21.0	---	---	22.0	4	65	0.6	---	
16.	14.9	---	10.0	---	---	9.0	2	1	1.5	---	
17.	14.9	---	8.0	---	---	4.0	2	5	1.2	---	
18.	14.9	---	14.0	---	---	8.0	2	45	3.7	---	
19.	14.9	---	11.5	---	---	8.0	2	10	1.6	---	
20.	14.9	15.1	30.0	---	---	36.0	4	60	3.6	11.5	

TABLE IV.

Artemisia tridentata Study Area Red Wash #2 Date 4 June 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	2.2	---	26.0	---	---	---	---	15	---	---
2.	2.7	---	46.0	---	---	---	---	30	---	---
3.	2.0	---	47.0	---	---	---	---	5	---	---
4.	2.5	---	17.0	---	---	---	---	0	---	---
5.	3.0	---	33.0	---	---	---	---	10	---	---
6.	2.6	---	18.0	---	---	---	---	0	---	---
7.	2.8	---	32.0	---	---	---	---	0	---	---
8.	2.8	---	26.0	---	---	---	---	35	---	---
9.	2.8	---	28.0	---	---	---	---	20	---	---
10.	2.8	---	33.0	---	---	---	---	0	---	---
11.	2.0	---	5.0	---	---	---	---	95	---	---
12.	3.0	---	36.0	---	---	---	---	10	---	---
13.	2.4	---	10.0	---	---	---	---	0	---	---
14.	2.2	---	34.0	---	---	---	---	0	---	---
15.	3.0	---	15.0	---	---	---	---	60	---	---
16.	2.8	---	28.0	---	---	---	---	5	---	---
17.	2.7	---	20.0	---	---	---	---	0	---	---
18.	2.6	---	42.0	---	---	---	---	0	---	---
19.	2.7	---	34.0	---	---	---	---	20	---	---
20.	2.4	---	44.0	---	---	---	---	30	---	---

TABLE IV.

Artemisia tridentata Study Area Red Wash #2 Date 15 July 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm	
	VEG.	REPR.									
1.	2.8	5.5	41.0	---	---	---	---	15	---	8.5	
2.	3.2	5.4	46.0	---	---	---	---	30	---	7.5	
3.	3.0	5.2	43.0	---	---	---	---	5	---	8.0	
4.	3.4	5.5	18.0	---	---	---	---	0	---	14.5	
5.	3.5	5.2	29.0	---	---	---	---	10	---	13.2	
6.	2.9	5.0	16.0	---	---	---	---	0	---	---	
7.	3.2	---	34.0	---	---	---	---	0	---	---	
8.	3.2	---	27.0	---	---	---	---	35	---	---	
9.	3.0	5.1	29.0	---	---	---	---	20	---	7.0	
10.	3.0	5.1	33.0	---	---	---	---	0	---	5.5	
11.	3.1	---	6.0	---	---	---	---	95	---	---	Dying
12.	3.0	5.0	38.0	---	---	---	---	10	---	9.0	
13.	3.2	---	12.5	---	---	---	---	0	---	---	
14.	3.4	5.0	32.0	---	---	---	---	0	---	10.5	
15.	3.0	---	14.5	---	---	---	---	60	---	---	
16.	3.1	5.2	33.0	---	---	---	---	5	---	8.5	
17.	3.0	---	29.5	---	---	---	---	0	---	---	
18.	3.4	5.2	42.5	---	---	---	---	0	---	11.5	
19.	2.9	5.2	38.5	---	---	---	---	20	---	7.5	
20.	3.4	5.2	40.0	---	---	---	---	30	---	10.0	

TABLE IV.

Artemisia tridentata   Study Area Red Wash #2   Date 6 August 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT.	PLANT LNGTH.	PLANT WIDTH	PLANT DIAM.	PLANT AGE CLASS	DEAD BRANCH PER- CENT	NEW VEG. TWIG LNGTH.	NEW SEED STALK LNGTH
	VEG.	REPR.	cm	cm	cm	cm			cm	cm
1.	3.4	5.1	28.0	---	---	47.0	4	15	---	11.0
2.	3.5	5.4	39.0	---	---	35.0	4	30	---	12.0
3.	3.4	5.3	36.0	---	---	92.0	4	5	---	12.5
4.	3.3	5.4	13.5	---	---	13.0	2	0	---	13.5
5.	3.5	5.3	26.0	---	---	29.0	4	10	---	14.5
6.	3.2	---	20.0	---	---	23.0	4	0	---	---
7.	3.2	5.0	28.0	---	---	52.0	4	0	---	4.5
8.	3.2	---	26.0	---	---	22.0	4	35	---	---
9.	3.2	5.1	27.0	---	---	21.0	4	20	---	7.0
10.	3.4	5.3	30.0	---	---	57.0	4	0	---	5.5
11.	------	------	------	------	DIED	------	------	------	------	------
12.	3.0	5.2	29.0	---	---	108.0	4	10	---	10.0
13.	3.1	---	11.0	---	---	8.0	2	0	---	---
14.	3.6	5.1	32.0	---	---	65.0	4	0	---	14.0
15.	3.2	---	17.0	---	---	16.0	2	60	---	---
16.	3.3	5.5	26.0	---	---	42.0	4	5	---	9.0
17.	3.2	---	21.0	---	---	45.0	4	0	---	---
18.	3.2	5.6	45.0	---	---	120.0	4	0	---	6.0
19.	3.2	5.8	34.0	---	---	52.0	4	20	---	8.0
20.	3.0	5.2	40.0	---	---	57.0	4	20	---	11.5

TABLE IV.

Artemisia tridentata Study Area Red Wash #2 Date 18 August 1976

PLANT NO.	PHENO. STAGE	SCORE	PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	4.3	5.8	40.0	---	---	47.0	4	15	3.0	14.0
2.	4.5	5.7	46.0	---	---	35.0	4	30	3.5	11.0
3.	4.2	5.7	43.0	---	---	92.0	4	5	2.5	11.0
4.	4.8	5.7	18.0	---	---	13.0	2	0	1.5	6.0
5.	4.4	5.9	29.0	---	---	29.0	4	10	2.3	12.0
6.	4.4	---	16.0	---	---	23.0	4	0	2.5	---
7.	4.5	5.6	34.0	---	---	52.0	4	0	3.3	6.0
8.	4.3	---	27.0	---	---	22.0	4	35	2.5	---
9.	4.5	5.7	29.0	---	---	21.0	4	20	2.0	6.0
10.	4.3	5.8	33.0	---	---	57.0	4	0	2.5	7.0
11.	------------------------------- D I E D -------------------------------									
12.	4.2	5.9	38.0	---	---	108.0	4	10	2.0	10.0
13.	4.2	---	12.5	---	---	8.0	2	0	2.0	---
14.	4.4	5.8	32.0	---	---	65.0	4	0	3.5	12.0
15.	4.2	---	14.5	---	---	16.0	2	60	1.5	---
16.	4.3	5.8	33.0	---	---	42.0	4	5	2.5	8.5
17.	4.4	---	29.5	---	---	45.0	4	0	2.0	---
18.	4.1	5.6	42.5	---	---	120.0	4	0	6.5	20
19.	4.4	5.4	38.5	---	---	52.0	4	20	2.0	9.0
20.	4.3	5.6	40.0	---	---	57.0	4	30	2.5	7.5

TABLE IV.

Artemisia tridentata Study Area Red Wash #2 Date 7 September 1976

PLANT NO.	PHENO. STAGE VEG.	PHENO. SCORE REPR.	PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
1.	4.9	10.5	40.0	---	---	47.0	4	15	3.0	13.5
2.	4.9	9.9	47.0	---	---	35.0	4	30	3.5	9.0
3.	4.9	10.8	41.0	---	---	92.0	4	5	2.5	12.0
4.	4.9	10.6	32.0	---	---	13.0	2	0	1.5	7.0
5.	4.9	10.2	32.0	---	---	29.0	4	10	2.3	12.0
6.	4.9	---	17.0	---	---	23.0	4	0	2.5	---
7.	4.9	10.5	34.0	---	---	52.0	4	0	3.3	7.0
8.	4.9	---	17.0	---	---	22.0	4	35	2.5	---
9.	4.9	10.5	24.0	---	---	21.0	4	20	2.0	17.0
10.	4.9	10.2	30.0	---	---	57.0	4	0	2.5	8.0
11.	------	-------	----------	---- D I	E D ---	-------	-------	-------	-------	-------
12.	4.9	10.6	38.0	---	---	108.0	4	10	2.0	10.3
13.	4.9	---	9.0	---	---	8.0	2	0	2.0	---
14.	4.9	11.2	35.0	---	---	65.0	4	0	3.5	12.0
15.	4.9	---	11.0	---	---	16.0	2	60	1.5	---
16.	4.9	10.2	27.0	---	---	42.0	4	5	2.5	10.8
17.	4.9	---	20.0	---	---	45.0	4	0	2.0	---
18.	4.9	10.2	46.0	---	---	120.0	4	0	6.5	9.0
19.	4.9	10.3	30.0	---	---	52.0	4	20	2.0	9.0
20.	4.9	10.2	38.0	---	---	57.0	4	30	2.5	9.0

TABLE IV.

Artemisia tridentata Study Area Red Wash #2 Date 6 November 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	14.1	15.4	40.0	---	---	47.0	4	20	3.0	13.5
2.	14.5	15.3	47.0	---	---	35.0	4	80	3.5	9.0
3.	14.0	15.4	41.0	---	---	92.0	4	10	2.5	12.0
4.	14.1	15.6	32.0	---	---	13.0	2	10	1.5	7.0
5.	14.3	15.5	32.0	---	---	29.0	4	5	2.3	12.0
6.	14.0	---	17.0	---	---	23.0	4	2	2.5	---
7.	14.1	15.3	34.0	---	---	52.0	4	5	3.3	7.0
8.	14.1	---	17.0	---	---	22.0	4	45	2.5	---
9.	14.0	15.2	24.0	---	---	21.0	4	20	2.0	17.0
10.	14.3	15.4	30.0	---	---	57.0	4	3	2.5	8.0
11.	-------	-------	----------	---- DIED ----		-------	-------	-------	-------	-------
12.	14.1	15.3	38.0	---	---	108.0	4	10	2.0	10.3
13.	14.5	---	9.0	---	---	8.0	2	5	2.0	---
14.	14.2	15.3	35.0	---	---	65.0	4	2	3.5	12.0
15.	14.4	---	11.0	---	---	16.0	2	25	1.5	---
16.	14.1	15.4	27.0	---	---	42.0	4	5	2.5	10.8
17.	14.3	---	20.0	---	---	45.0	4	15	2.0	---
18.	14.3	15.3	46.0	---	---	120.0	4	15	6.5	9.0
19.	14.4	15.4	30.0	---	---	52.0	4	25	2.0	9.0
20.	14.2	15.6	38.0	---	---	57.0	4	30	2.5	9.0

TABLE IV.

Artemisia tridentata Study Area Shoshoni Ant #7 Date 3 June 1976

PLANT NO.	PHENO. STAGE SCORE.		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	2.5	---	7.6	---	---	---	---	2	---	---
2.	2.8	---	11.0	---	---	---	---	15	---	---
3.	2.6	---	10.0	---	---	---	---	45	---	---
4.	2.7	---	17.0	---	---	---	---	0	---	---
5.	2.3	---	17.8	---	---	---	---	0	---	---
6.	3.1	---	28.0	---	---	---	---	5	---	---
7.	2.7	---	21.8	---	---	---	---	60	---	---
8.	2.8	---	22.5	---	---	---	---	5	---	---
9.	2.6	---	18.0	---	---	---	---	0	---	---
10.	2.3	---	10.0	---	---	---	---	45	---	---
11.	2.6	---	13.5	---	---	---	---	5	---	---
12.	2.5	---	15.0	---	---	---	---	5	---	---
13.	2.8	---	19.0	---	---	---	---	10	---	---
14.	2.5	---	18.8	---	---	---	---	5	---	---
15.	2.1	---	26.0	---	---	---	---	80	---	---
16.	2.7	---	12.0	---	---	---	---	15	---	---
17.	2.5	---	18.0	---	---	---	---	5	---	---
18.	2.8	---	24.0	---	---	---	---	35	---	---
19.	2.9	---	16.0	---	---	---	---	5	---	---
20.	2.6	---	13.5	---	---	---	---	10	---	---

TABLE IV.

Artemisia tridentata Study Area Shoshoni Ant #7 Date 6 July 1976

PLANT NO.	PHENO. STAGE SCORE VEG.	PHENO. STAGE SCORE REPR.	PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
1.	2.5	---	7.6	---	---	---	---	2	---	---
2.	2.7	---	11.0	---	---	---	---	15	---	---
3.	2.4	---	10.0	---	---	---	---	45	---	---
4.	2.6	5.0	17.0	---	---	---	---	0	---	2.8
5.	2.7	---	17.8	---	---	---	---	0	---	---
6.	2.9	5.1	28.0	---	---	---	---	5	---	4.0
7.	2.8	5.2	21.8	---	---	---	---	60	---	3.7
8.	3.0	5.2	22.5	---	---	---	---	5	---	3.3
9.	2.8	---	18.0	---	---	---	---	0	---	---
10.	2.7	---	10.0	---	---	---	---	45	---	---
11.	2.9	---	13.5	---	---	---	---	5	---	---
12.	2.9	5.2	15.0	---	---	---	---	5	---	3.0
13.	2.8	5.3	19.0	---	---	---	---	10	---	3.6
14.	2.7	5.2	18.8	---	---	---	---	5	---	1.5
15.	2.8	5.1	26.0	---	---	---	---	80	---	2.0
16.	2.9	---	12.0	---	---	---	---	15	---	---
17.	2.7	---	18.0	---	---	---	---	5	---	---
18.	2.8	5.3	24.0	---	---	---	---	35	---	7.5
19.	2.9	5.3	16.0	---	---	---	---	5	---	4.0
20.	2.8	---	13.5	---	---	---	---	10	---	---

TABLE IV.

Artemisia tridentata Study Area Shoshoni Ant #7 Date 3 August 1976

PLANT NO.	PHENO. STAGE SCORE VEG.	REPR.	PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
1.	3.4	---	7.6	---	---	27.0	4	2	---	---
2.	3.2	---	11.0	---	---	36.0	4	15	---	---
3.	3.2	---	10.0	---	---	23.0	2	45	---	---
4.	3.2	5.0	17.0	---	---	26.0	4	0	---	2.0
5.	3.0	---	17.8	---	---	29.0	4	0	---	---
6.	3.2	5.2	28.0	---	---	55.0	4	5	---	3.0
7.	3.4	5.3	21.8	---	---	24.0	4	60	---	3.0
8.	3.2	5.0	22.5	---	---	35.0	4	5	---	2.0
9.	3.0	---	18.0	---	---	28.0	4	0	---	---
10.	3.3	---	10.0	---	---	14.0	2	45	---	---
11.	3.5	---	13.5	---	---	31.0	4	5	---	---
12.	3.0	---	15.0	---	---	5.0	2	5	---	---
13.	3.2	---	19.0	---	---	31.0	4	10	---	---
14.	3.1	---	18.8	---	---	24.0	5	5	---	---
15.	3.2	6.0	26.0	---	---	7.0	3	80	---	2.0
16.	3.4	---	12.0	---	---	21.0	4	15	---	---
17.	3.2	---	18.0	---	---	24.0	4	5	---	---
18.	3.4	6.0	24.0	---	---	27.0	4	35	---	3.0
19.	3.5	---	16.0	---	---	29.0	4	5	---	---
20.	3.2	---	13.5	---	---	27.0	4	10	---	---

TABLE IV.

Artemisia tridentata Study Area Shoshoni Ant #7 Date 18 August 1976

PLANT NO.	PHENO. STAGE SCORE VEG.	REPR.	PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
1.	4.1	---	16.0	---	---	27.0	4	2	2.5	---
2.	4.2	---	14.0	---	---	36.0	4	15	3.5	---
3.	4.0	---	14.0	---	---	23.0	2	45	1.5	---
4.	3.9	5.9	19.0	---	---	26.0	4	0	1.5	4.0
5.	3.9	---	12.0	---	---	29.0	4	0	1.0	---
6.	4.3	5.8	36.5	---	---	55.0	4	5	3.0	3.0
7.	4.3	5.9	24.0	---	---	24.0	4	60	1.5	5.0
8.	4.2	5.4	23.0	---	---	35.0	4	5	1.5	3.0
9.	3.9	---	16.0	---	---	28.0	4	0	1.0	---
10.	3.9	---	14.0	---	---	14.0	2	45	1.0	---
11.	4.4	---	15.0	---	---	31.0	4	5	3.0	---
12.	4.0	---	8.0	---	---	5.0	2	5	0.5	---
13.	4.5	---	21.0	---	---	31.0	4	10	1.3	---
14.	4.2	---	19.0	---	---	24.0	4	5	1.0	---
15.	4.1	6.1	27.0	---	---	7.0	3	80	1.5	2.0
16.	4.0	---	10.0	---	---	21.0	4	15	1.0	---
17.	3.9	---	17.0	---	---	24.0	4	5	1.5	---
18.	4.2	---	19.0	---	---	27.0	4	35	2.0	---
19.	4.4	6.0	18.0	---	---	29.0	4	5	2.0	2.0
20.	4.2	---	14.5	---	---	27.0	4	10	2.0	---

TABLE IV.

Artemisia tridentata   Study Area Shoshoni Ant #7   Date 19 September 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER- CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	4.5	7.1	16.0	---	---	27.0	4	5	2.5	---
2.	4.7	7.8	14.0	---	---	36.0	4	30	3.5	---
3.	4.7	---	14.0	---	---	23.0	2	60	1.5	---
4.	4.7	7.8	19.0	---	---	26.0	4	50	1.5	4.0
5.	4.8	---	12.0	---	---	29.0	4	5	1.0	---
6.	4.8	7.1	36.5	---	---	55.0	4	15	3.0	3.0
7.	4.4	7.1	24.0	---	---	24.0	4	55	1.5	5.0
8.	4.8	7.1	23.0	---	---	35.0	4	5	1.5	3.0
9.	4.3	---	16.0	---	---	28.0	4	15	1.0	---
10.	4.7	---	14.0	---	---	14.0	2	85	1.0	---
11.	4.8	7.5	15.0	---	---	31.0	4	35	3.0	---
12.	4.7	---	8.0	---	---	5.0	2	50	0.5	---
13.	4.9	7.3	21.0	---	---	31.0	4	45	1.3	---
14.	4.7	---	19.0	---	---	24.0	4	20	1.0	---
15.	4.2	7.1	27.0	---	---	7.0	3	75	1.5	2.0
16.	4.4	---	10.0	---	---	21.0	4	20	1.0	---
17.	4.2	---	17.0	---	---	24.0	4	10	1.5	---
18.	4.7	7.5	19.0	---	---	27.0	4	50	2.0	---
19.	4.9	7.8	18.0	---	---	29.0	4	40	2.0	2.0
20.	4.9	---	14.5	---	---	27.0	4	25	2.0	---

TABLE IV.

Artemisia tridentata Study Area Shoshoni Ant #7 Date 30 October 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm	
	VEG.	REPR.									
1.	14.1	---	16.0	---	---	27.0	4	5	2.5	---	
2.	14.1	13.0	14.0	---	---	36.0	4	30	3.5	---	
3.	14.3	---	14.0	---	---	23.0	2	60	1.5	---	
4.	14.0	13.0	19.0	---	---	26.0	4	50	1.5	4.0	
5.	14.1	---	12.0	---	---	29.0	4	5	1.0	---	
6.	14.2	13.0	36.5	---	---	55.0	4	15	3.0	4.0	
7.	14.1	13.0	24.0	---	---	24.0	4	55	1.5	5.0	
8.	14.1	---	23.0	---	---	35.0	4	5	1.5	---	
9.	14.1	---	16.0	---	---	28.0	4	15	1.0	---	
10.	14.2	---	14.0	---	---	14.0	2	85	1.0	---	
11.	14.1	---	15.0	---	---	31.0	4	35	3.0	---	
12.	14.0	---	8.0	---	---	5.0	2	50	0.5	---	
13.	14.2	13.0	21.0	---	---	31.0	4	40	1.3	3.6	
14.	14.1	---	19.0	---	---	24.0	4	20	1.0	---	
15.	14.4	13.0	27.0	---	---	7.0	3	75	1.5	2.0	
16.	14.2	---	10.0	---	---	21.0	4	20	1.0	---	
17.	14.7	---	17.0	---	---	24.0	4	10	1.5	---	
18.	14.4	13.0	19.0	---	---	27.0	4	50	2.0	7.5	
19.	14.5	13.0	18.0	---	---	29.0	4	40	2.0	4.0	
20.	14.2	---	14.5	---	---	27.0	4	25	2.0	---	

TABLE IV.

Artemisia tridentata Study Area Sweetwater Date 3 June 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	2.9	---	15.5	---	---	---	---	5	---	---
2.	2.3	---	7.0	---	---	---	---	50	---	---
3.	2.8	---	21.0	---	---	---	---	20	---	---
4.	2.9	---	37.0	---	---	---	---	5	---	---
5.	2.9	---	21.5	---	---	---	---	30	---	---
6.	2.8	---	15.0	---	---	---	---	20	---	---
7.	2.7	---	16.0	---	---	---	---	10	---	---
8.	2.5	---	6.5	---	---	---	---	5	---	---
9.	3.0	---	19.5	---	---	---	---	5	---	---
10.	2.6	---	26.0	---	---	---	---	15	---	---
11.	2.9	---	43.0	---	---	---	---	5	---	---
12.	2.3	---	18.9	---	---	---	---	55	---	---
13.	2.8	---	14.5	---	---	---	---	5	---	---
14.	2.5	---	13.5	---	---	---	---	30	---	---
15.	2.6	---	35.0	---	---	---	---	0	---	---
16.	2.5	---	11.0	---	---	---	---	5	---	---
17.	2.3	---	8.5	---	---	---	---	0	---	---
18.	2.8	---	38.0	---	---	---	---	5	---	---
19.	2.7	---	18.5	---	---	---	---	15	---	---
20.	2.7	---	13.5	---	---	---	---	70	---	---

TABLE IV.

Artemisia tridentata Study Area Sweetwater Date 1 July 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	2.8	5.2	15.5	---	---	---	---	5	---	6.2
2.	2.3	---	7.0	---	---	---	---	50	---	---
3.	2.8	5.1	21.0	---	---	---	---	20	---	4.0
4.	3.1	5.3	37.0	---	---	---	---	5	---	7.5
5.	3.1	5.1	21.5	---	---	---	---	30	---	5.1
6.	2.9	---	15.0	---	---	---	---	20	---	---
7.	2.9	5.2	16.0	---	---	---	---	10	---	6.7
8.	2.9	---	6.5	---	---	---	---	5	---	---
9.	3.2	5.3	19.5	---	---	---	---	5	---	11.0
10.	2.9	---	26.0	---	---	---	---	15	---	---
11.	3.1	5.3	43.0	---	---	---	---	5	---	7.5
12.	2.8	---	18.9	---	---	---	---	55	---	---
13.	3.2	5.2	14.5	---	---	---	---	5	---	8.5
14.	2.9	---	13.5	---	---	---	---	30	---	---
15.	3.2	5.0	35.0	---	---	---	---	0	---	4.0
16.	2.8	---	11.0	---	---	---	---	5	---	---
17.	2.6	---	8.5	---	---	---	---	0	---	---
18.	3.0	5.1	38.0	---	---	---	---	5	---	4.5
19.	2.9	5.1	18.5	---	---	---	---	15	---	5.8
20.	3.1	---	13.5	---	---	---	---	70	---	---

TABLE IV.

Artemisia tridentata Study Area Sweetwater Date 2 August 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm	
	VEG.	REPR.									
1.	3.5	5.8	15.5	---	---	41.0	4	5	---	6.5	
2.	3.5	---	7.0	---	---	10.0	2	50	---	---	
3.	3.8	5.2	21.0	---	---	39.0	4	20	---	4.5	
4.	3.9	5.8	37.0	---	---	44.0	4	5	---	9.0	
5.	3.6	5.9	21.5	---	---	12.0	2	30	---	6.0	
6.	3.4	---	15.0	---	---	32.0	4	20	---	---	
7.	3.2	5.8	16.0	---	---	29.0	4	10	---	8.0	
8.	3.4	---	6.5	---	---	21.0	4	5	---	---	
9.	4.0	5.7	19.5	---	---	65.0	4	5	---	11.5	
10.	3.7	5.8	26.0	---	---	55.0	4	15	---	5.5	
11.	3.9	5.8	43.0	---	---	50.0	4	5	---	6.5	
12.	3.2	---	18.9	---	---	18.5	2	55	---	---	
13.	3.5	---	14.5	---	---	20.0	4	5	---	---	
14.	3.6	---	13.5	---	---	19.5	4	30	---	---	
15.	4.0	5.2	35.0	---	---	75.0	4	0	---	8.0	
16.	3.2	---	11.0	---	---	42.0	4	5	---	---	
17.	3.4	---	8.5	---	---	46.0	4	0	---	---	
18.	3.8	5.8	38.0	---	---	51.0	4	5	---	5.5	
19.	3.4	5.6	18.5	---	---	60.0	4	15	---	7.5	
20.	3.8	---	13.5	---	---	12.0	4	70	---	---	

TABLE IV.

Artemisia tridentata

Study Area Sweetwater

Date 18 August 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	3.9	5.7	17.0	---	---	41.0	4	5	---	6.0
2.	3.8	---	7.0	---	---	10.0	2	50	---	---
3.	4.0	5.6	27.0	---	---	39.0	4	20	---	5.0
4.	4.0	5.7	40.0	---	---	44.0	4	5	---	10.0
5.	3.9	---	21.0	---	---	12.0	2	30	---	---
6.	4.1	---	25.0	---	---	32.0	4	20	---	---
7.	3.9	5.3	18.0	---	---	29.0	4	10	---	7.0
8.	3.8	---	7.0	---	---	21.0	4	5	---	---
9.	4.1	5.8	28.0	---	---	65.0	4	5	---	12.0
10.	4.2	---	28.0	---	---	55.0	4	15	---	---
11.	4.2	5.4	32.0	---	---	50.0	4	5	---	6.0
12.	3.9	---	16.0	---	---	18.5	2	55	---	---
13.	4.2	5.8	16.0	---	---	20.0	4	5	---	10.0
14.	4.1	---	14.0	---	---	19.5	4	30	---	---
15.	4.0	---	41.0	---	---	75.0	4	0	---	---
16.	4.0	---	12.0	---	---	42.0	4	5	---	---
17.	3.9	---	8.0	---	---	46.0	4	0	---	---
18.	4.2	5.5	34.0	---	---	51.0	4	5	---	5.2
19.	4.2	5.2	20.0	---	---	60.0	4	15	---	5.5
20.	4.4	---	15.0	---	---	12.0	4	70	---	---

TABLE IV.

Artemisia tridentata Study Area Sweetwater Date 19 September 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	4.8	8.8	17.0	---	---	41.0	4	5	0.5	6.0
2.	4.5	---	7.0	---	---	10.0	2	50	0.5	---
3.	4.8	10.1	27.0	---	---	39.0	4	20	1.0	5.0
4.	4.5	9.2	40.0	---	---	44.0	4	5	1.0	8.0
5.	4.5	9.0	21.0	---	---	12.0	2	30	0.5	3.0
6.	4.8	---	25.0	---	---	32.0	4	20	1.5	---
7.	4.8	9.3	18.0	---	---	29.0	4	10	1.0	6.0
8.	4.7	---	7.0	---	---	21.0	4	5	0.5	---
9.	4.8	9.5	28.0	---	---	65.0	4	3	1.5	8.0
10.	4.5	---	28.0	---	---	55.0	4	15	1.0	---
11.	4.8	9.5	32.0	---	---	50.0	4	5	1.0	6.0
12.	4.2	---	16.0	---	---	18.5	2	55	0.5	---
13.	4.5	8.8	16.0	---	---	20.0	4	5	1.0	5.0
14.	4.6	---	14.0	---	---	19.5	4	30	0.5	---
15.	4.8	---	41.0	---	---	75.0	4	0	1.5	---
16.	4.7	---	12.0	---	---	42.0	4	5	0.5	---
17.	4.5	---	8.0	---	---	46.0	4	0	0.5	---
18.	4.8	8.6	34.0	---	---	51.0	4	5	1.0	6.0
19.	4.5	8.3	20.0	---	---	60.0	4	15	0.5	6.0
20.	4.7	---	15.0	---	---	12.0	4	70	1.0	---

TABLE IV.

Artemisia tridentata   Study Area Sweetwater   Date 1 November 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	14.1	10.5	17.0	---	---	41.0	4	5	0.5	6.0
2.	14.0	---	7.0	---	---	10.0	2	50	0.5	---
3.	14.1	10.4	27.0	---	---	39.0	4	20	1.0	5.0
4.	14.1	10.1	40.0	---	---	44.0	4	5	1.0	8.0
5.	14.2	10.2	21.0	---	---	12.0	2	30	0.5	3.0
6.	14.4	---	25.0	---	---	32.0	4	20	1.5	---
7.	14.4	10.7	18.0	---	---	29.0	4	10	1.0	6.0
8.	14.2	---	7.0	---	---	21.0	4	15	0.5	---
9.	14.2	10.1	28.0	---	---	65.0	4	5	1.5	8.0
10.	14.3	10.5	28.0	---	---	55.0	4	15	1.0	6.2
11.	14.3	10.4	32.0	---	---	50.0	4	5	1.0	6.0
12.	14.1	9.8	16.0	---	---	18.5	2	55	0.5	5.0
13.	14.2	10.3	16.0	---	---	20.0	4	5	1.0	5.7
14.	14.4	---	14.0	---	---	19.5	4	30	0.5	---
15.	14.6	---	41.0	---	---	75.0	4	0	1.5	---
16.	14.3	10.0	12.0	---	---	42.0	4	5	0.5	6.1
17.	14.1	---	8.0	---	---	46.0	4	0	0.5	---
18.	14.2	10.8	34.0	---	---	51.0	4	5	1.0	6.0
19.	14.1	11.5	20.0	---	---	60.0	4	15	0.5	6.0
20.	14.2	11.4	15.0	---	---	12.0	4	70	1.0	6.3

TABLE IV.

Artemisia tridentata Study Area Upper Gov't Draw Date 3 June 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm	
	VEG.	REPR.									
1.	2.1	---	21.0	---	---	---	---	15	---	---	
2.	2.2	---	25.0	---	---	---	---	30	---	---	
3.	2.7	---	30.5	---	---	---	---	15	---	---	
4.	2.7	---	25.0	---	---	---	---	20	---	---	
5.	2.7	---	28.0	---	---	---	---	15	---	---	
6.	2.0	---	31.0	---	---	---	---	5	---	---	
7.	2.9	---	18.5	---	---	---	---	0	---	---	
8.	2.8	---	18.0	---	---	---	---	10	---	---	
9.	2.2	---	35.5	---	---	---	---	0	---	---	
10.	2.0	---	29.5	---	---	---	---	0	---	---	
11.	2.0	---	32.0	---	---	---	---	10	---	---	
12.	2.1	---	19.0	---	---	---	---	0	---	---	
13.	2.1	---	32.0	---	---	---	---	5	---	---	
14.	2.8	---	7.0	---	---	---	---	65	---	---	
15.	2.8	---	21.5	---	---	---	---	0	---	---	
16.	2.1	---	24.5	---	---	---	---	10	---	---	
17.	2.3	---	28.0	---	---	---	---	5	---	---	
18.	2.1	---	38.0	---	---	---	---	5	---	---	
19.	2.9	---	18.5	---	---	---	---	20	---	---	
20.	2.1	---	38.0	---	---	---	---	0	---	---	

TABLE IV.

Artemisia tridentata Study Area Upper Gov't Draw Date 13 July 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm	
	VEG.	REPR.									
1.	3.0	5.0	21.0	---	---	---	---	15	---	6.0	
2.	3.2	5.1	25.0	---	---	---	---	30	---	5.0	
3.	3.1	5.0	30.5	---	---	---	---	15	---	3.5	
4.	3.0	---	25.0	---	---	---	---	20	---	---	
5.	3.3	---	28.0	---	---	---	---	15	---	---	
6.	3.4	5.4	31.0	---	---	---	---	5	---	9.2	
7.	3.3	---	18.5	---	---	---	---	0	---	---	
8.	2.9	---	18.0	---	---	---	---	10	---	---	
9.	3.2	5.2	35.5	---	---	---	---	0	---	6.5	
10.	3.4	---	29.5	---	---	---	---	0	---	---	
11.	3.2	5.2	32.0	---	---	---	---	10	---	6.0	
12.	3.0	5.4	19.0	---	---	---	---	0	---	6.5	
13.	3.5	5.3	32.0	---	---	---	---	5	---	7.5	
14.	2.8	---	7.0	---	---	---	---	65	---	---	
15.	3.2	5.0	21.5	---	---	---	---	0	---	4.5	
16.	3.8	5.2	27.5	---	---	---	---	10	---	8.0	
17.	3.1	5.0	28.0	---	---	---	---	5	---	5.5	
18.	3.2	---	38.0	---	---	---	---	5	---	---	
19.	2.8	5.0	18.5	---	---	---	---	20	---	6.0	
20.	3.5	---	38.0	---	---	---	---	0	---	---	

TABLE IV.

Artemisia tridentata Study Area Upper Gov't Draw Date 3 August 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm	
	VEG.	REPR.									
1.	3.6	---	21.0	---	---	20.0	4	15	---	---	
2.	3.4	---	25.0	---	---	20.0	4	30	---	---	
3.	3.2	5.2	30.5	---	---	32.0	4	15	---	4.5	
4.	3.4	---	25.0	---	---	16.0	4	20	---	---	
5.	3.4	5.4	28.0	---	---	35.0	4	15	---	5.5	
6.	3.2	5.5	31.0	---	---	44.0	4	5	---	11.0	
7.	3.4	---	18.5	---	---	17.0	2	0	---	---	
8.	3.2	---	18.0	---	---	14.0	2	10	---	---	
9.	3.6	5.4	35.5	---	---	42.0	4	0	---	8.5	
10.	3.5	5.6	29.5	---	---	44.0	4	0	---	10.5	
11.	3.2	5.4	32.0	---	---	28.0	4	10	---	6.0	
12.	3.4	5.2	19.0	---	---	13.0	2	0	---	6.0	
13.	3.4	5.6	32.0	---	---	51.0	4	5	---	6.0	
14.	3.0	---	7.0	---	---	4.0	2	65	---	---	
15.	3.2	5.0	21.5	---	---	24.0	3	0	---	3.5	
16.	3.4	5.2	24.5	---	---	30.0	4	10	---	8.0	
17.	3.6	5.4	28.0	---	---	40.0	4	5	---	5.0	
18.	3.2	5.4	38.0	---	---	37.0	4	5	---	7.5	
19.	3.4	5.2	18.5	---	---	16.0	2	20	---	8.0	
20.	3.4	---	38.0	---	---	42.0	4	0	---	---	

TABLE IV.

Artemisia tridentata Study Area Upper Gov't Draw Date 18 August 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	3.8	---	21.0	---	---	20.0	4	15	---	---
2.	3.8	5.4	25.0	---	---	20.0	4	30	---	7.0
3.	3.8	5.7	30.5	---	---	32.0	4	15	---	5.0
4.	4.0	---	25.0	---	---	16.0	4	20	---	---
5.	3.7	5.7	28.0	---	---	35.0	4	15	---	4.5
6.	3.6	5.7	31.0	---	---	44.0	4	5	---	8.0
7.	3.8	5.2	18.5	---	---	17.0	2	0	---	2.0
8.	3.6	5.1	18.0	---	---	14.0	2	10	---	2.0
9.	3.9	5.2	35.5	---	---	42.0	4	0	---	7.5
10.	3.9	5.1	29.5	---	---	44.0	4	0	---	10.0
11.	3.4	---	32.0	---	---	28.0	4	10	---	---
12.	3.8	5.6	19.0	---	---	13.0	2	0	---	6.0
13.	3.6	5.8	32.0	---	---	51.0	4	5	---	5.5
14.	3.7	---	7.0	---	---	4.0	2	65	---	---
15.	3.7	5.8	21.5	---	---	24.0	3	0	---	5.8
16.	3.8	5.8	24.5	---	---	30.0	4	10	---	8.5
17.	4.0	5.7	28.0	---	---	40.0	4	5	---	5.5
18.	3.7	5.8	38.0	---	---	37.0	4	5	---	9.0
19.	3.6	5.7	18.5	---	---	16.0	2	20	---	4.0
20.	3.7	---	38.0	---	---	42.0	4	0	---	---

TABLE IV.

Artemisia tridentata Study Area Upper Gov't Draw Date 18 September 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm
	VEG.	REPR.								
1.	4.8	---	22.0	---	---	20.0	4	15	1.5	---
2.	4.9	9.5	25.0	---	---	20.0	4	30	2.0	7.0
3.	4.9	9.7	28.0	---	---	32.0	4	15	1.5	4.0
4.	4.9	---	26.0	---	---	16.0	4	20	1.5	---
5.	4.9	8.5	30.0	---	---	35.0	4	15	1.5	4.0
6.	4.9	9.8	31.0	---	---	44.0	4	5	1.5	17.0
7.	4.6	8.5	17.0	---	---	17.0	2	0	1.5	13.0
8.	4.5	7.5	17.5	---	---	14.0	2	10	1.5	2.5
9.	4.7	7.5	35.0	---	---	42.0	4	0	2.0	8.0
10.	4.7	7.4	34.0	---	---	44.0	4	0	2.5	7.0
11.	4.9	9.8	34.0	---	---	28.0	4	10	1.5	5.0
12.	4.8	9.8	23.0	---	---	13.0	2	0	2.0	6.0
13.	4.9	9.8	38.0	---	---	51.0	4	5	1.5	5.0
14.	4.4	---	7.5	---	---	4.0	2	65	1.0	---
15.	4.8	9.7	23.0	---	---	24.0	3	0	1.5	3.0
16.	4.8	8.9	31.0	---	---	30.0	4	10	1.0	7.0
17.	4.7	9.0	38.0	---	---	40.0	4	5	2.0	4.0
18.	4.8	---	39.0	---	---	37.0	4	5	1.5	---
19.	4.9	9.5	18.0	---	---	16.0	2	20	0.5	4.0
20.	4.8	---	37.8	---	---	42.0	4	0	2.0	---

TABLE IV.

Artemisia tridentata Study Area Upper Gov't Draw Date 6 November 1976

PLANT NO.	PHENO. STAGE SCORE		PLANT HGHT. cm	PLANT LNGTH. cm	PLANT WIDTH cm	PLANT DIAM. cm	PLANT AGE CLASS	DEAD BRANCH PER-CENT	NEW VEG. TWIG LNGTH. cm	NEW SEED STALK LNGTH cm	
	VEG.	REPR.									
1.	14.0	---	22.0	---	---	20.0	4	15	1.5	---	
2.	14.1	15.3	25.0	---	---	20.0	4	30	2.0	7.0	
3.	14.1	15.2	28.0	---	---	32.0	4	15	1.5	4.0	
4.	14.1	---	26.0	---	---	16.0	4	20	1.5	---	
5.	14.1	13.9	30.0	---	---	35.0	4	15	1.5	4.0	
6.	14.1	15.3	31.0	---	---	44.0	4	5	1.5	17.0	
7.	4.9	15.0	17.0	---	---	17.0	2	0	1.5	13.0	
8.	4.9	13.9	17.5	---	---	14.0	2	10	1.5	2.5	
9.	14.0	13.9	35.0	---	---	42.0	4	0	2.0	8.0	
10.	14.0	15.0	34.0	---	---	44.0	4	0	2.5	7.0	
11.	14.1	15.0	34.0	---	---	28.0	4	10	1.5	5.0	
12.	14.1	15.1	23.0	---	---	13.0	2	0	2.0	6.0	
13.	14.2	15.2	38.0	---	---	51.0	4	5	1.5	5.0	
14.	4.9	---	7.5	---	---	4.0	2	65	1.0	---	
15.	14.0	15.3	23.0	---	---	24.0	3	0	1.5	3.0	
16.	14.0	15.0	31.0	---	---	30.0	4	10	1.0	7.0	
17.	14.0	15.3	38.0	---	---	40.0	4	5	2.0	4.0	
18.	14.1	---	39.0	---	---	37.0	4	5	1.5	---	
19.	14.2	15.3	18.0	---	---	16.0	2	20	0.5	4.0	
20.	14.0	---	37.8	---	---	42.0	4	0	2.0	---	

TABLE V. Phenological development dates for all species for three major growth stages - growth initiation, full bloom, seed dissemination - by exclosure for the years 1973 through 1976.

		Page
Bud Kimball Exclosure		215
Cedar Mountain	"	215
Cumberland #3	"	216
Demer	"	217
Farson	"	217
Horse Creek	"	219
Mesa Antelope	"	219 & 220
Owl Draw	"	220 & 221
Red Wash #2	"	221
Shoshoni Ant #7	"	222
Sweetwater	"	222 & 223
Upper Gov't Draw	"	218

TABLE V.

Exposure	Growth Initiation				Full Bloom				Seed Dissemination			
Species	1973	1974	1975	1976	1973	1974	1975	1976	1973	1974	1975	1976
Bud Kimball												
AGSM	---	Mar	Mar	Mar	---	25 Jun	30 Jun	20 Jul	10 Aug	10 Aug	15 Aug	19 Aug
ALTE	---	---	---	---	---	---	20 Jun	---	12 Jul	17 Jul	20 Jul	---
ARTR	---	20 May	May	May	25 Sep	20 Sep	Sep	25 Sep	---	Nov	Nov	Nov
BRTE	---	---	---	Mar	---	15 Jun	25 Jun	23 Jun	---	---	20 Jul	30 Jul
CAS	---	25 Apr	---	Apr	---	5 Jul	20 Jun	15 Jun	20 Jul	25 Jul	25 Jul	15 Jul
CRE	---	---	---	---	---	20 Jun	15 Jun	5 Jul	---	---	---	15 Jul
CYMO	---	---	---	---	---	---	---	---	---	---	15 Jul	---
DEPI	---	---	---	---	---	---	20 Jun	15 Jun	---	---	25 Jul	25 Jun
ERPU	---	---	---	Apr	---	---	25 Jun	15 Jun	---	---	25 Jul	30 Jun
KOCR	---	Mar	Mar	Mar	---	20 Jun	---	20 Jun	20 Jul	10 Jul	---	25 Jul
LARE	---	---	---	Mar	---	10 Jun	17 Jun	15 Jun	20 Jul	25 Jul	25 Jul	25 Jul
LERE	---	25 Apr	---	Apr	---	25 Jun	25 Jun	27 Jun	10 Jul	15 Jul	15 Jul	10 Jul
MAGR	---	5 May	---	May	---	15 Jun	---	15 Jun	---	15 Jul	---	20 Jul
MATA	---	---	---	May	---	---	23 Jun	20 Jul	---	---	---	---
OPPO	---	---	---	Apr	---	15 Jun	---	20 Jun	Sep	30 Aug	15 Aug	5 Aug
PHHO	---	---	---	Mar	---	---	10 Jun	15 Jun	---	---	---	17 Jul
PLSA	---	---	---	---	---	---	23 Jun	---	25 Jul	20 Jul	25 Jul	---
POSE	---	Mar	Mar	Mar	---	5 Jun	25 Jun	1 Jul	15 Jul	1 Jul	5 Jul	20 Jul
SIHY	---	Mar	Mar	Apr	---	15 Jul	10 Jul	15 Jul	20 Jul	30 Jul	30 Jul	30 Jul
SPCO	---	Mar	---	Apr	---	25 Jun	30 Jun	10 Jul	---	20 Jul	25 Jul	10 Aug
SPCR	---	---	---	---	---	---	30 Jun	---	---	---	27 Jul	---
STCO	---	Mar	Mar	Mar	---	25 Jun	5 Jul	10 Jul	25 Jul	30 Jul	30 Jul	5 Aug
STVI	---	---	---	Mar	---	---	---	3 Jul	---	---	---	20 Jul
VIO	---	---	---	---	---	---	15 Jun	---	---	---	---	---
Cedar Mountain												
AGCR	---	5 Mar	Apr	Apr	Jun	17 Jun	Jun	20 Jun	---	---	Aug	10 Aug
AGSP	---	---	Apr	Apr	5 Jul	30 Jun	20 Jun	1 Jul	---	---	5 Aug	20 Aug
ARHO	---	Apr	---	Apr	Jun	5 Jun	---	3 Jun	---	---	---	5 Aug
ARSP[2]	---	Apr	---	Apr	Jul	Jul	25 Jun	5 Jul	---	---	Jul	1 Aug
ARTR	---	24 May	15 May	May	Sep	Sep	Sep	Sep	---	---	---	Nov
ASPU	---	Apr	Apr	Mar	---	30 May	25 May	May	30 Jun	17 Jun	25 Jun	1 Jul
ATCO	---	May	May	May	Jul	25 Jun	Jul	---	---	---	---	---
ATGA	---	Apr	Apr	Apr	Jun	5 Jun	5 Jun	1 Jun	---	---	---	1 Aug
CHVI	May	May	10 May	May	---	Aug	Aug	18 Aug	---	---	---	Sep
EROV	---	---	May	---	---	Jun	10 Jun	Jun	---	Aug	1 Aug	5 Aug
ERPU	---	---	10 May	Apr	Jun	15 Jun	---	20 Jun	Jul	Jul	Aug	20 Jul
EULA	---	24 May	15 May	May	---	Jul	15 Jul	---	---	---	---	---
HAAC	---	Apr	---	Apr	10 Jun	1 Jun	5 Jun	7 Jun	---	21 Jun	20 Jul	1 Jul
KOAM	---	11 Mar	Mar	Mar	---	Jul	10 Jul	---	---	---	Aug	---
OPPO	---	Apr	5 May	May	10 Jul	Jul	10 Jul	15 Jun	---	---	---	10 Aug
ORHY	---	5 Mar	---	Apr	20 Jun	20 Jun	---	20 Jun	Aug	---	25 Jul	1 Aug
PHHO	---	Apr	---	Apr	---	30 May	30 May	5 Jun	28 Jun	20 Jun	Jul	30 Jun
PHLO	---	---	---	---	---	30 May	15 Jun	10 Jun	---	15 Jun	15 Jul	20 Jul
POSE	---	15 Mar	---	Mar	Jun	15 Jun	15 Jun	15 Jun	Jul	5 Jul	Jul	10 Jul
SIHY	---	10 Mar	---	---	28 Jun	15 Jun	20 Jun	15 Jun	1 Aug	Jul	Aug	10 Aug
SILI	---	---	---	---	---	25 May	---	1 Jul	28 Jul	---	---	---
SPCO	---	---	---	---	---	15 Jun	Jul	12 Jun	---	---	Aug	20 Jul
TENU	---	Apr	10 May	Apr	Jul	Jul	Jul	---	---	---	Aug	20 Aug

TABLE V. (continued)

Exclosure	Growth Initiation				Full Bloom				Seed Dissemination			
Species	1973	1974	1975	1976	1973	1974	1975	1976	1973	1974	1975	1976
Cumberland #3												
AGGL	---	10 Mar	---	May	15 Jun	10 Jun	---	10 Jun	Aug	Jun	---	10 Jul
AGSM	---	Apr	Mar	Apr	25 Jul	30 Jun	Jul	---	20 Aug	5 Aug	Aug	---
AGSP	---	Apr	Mar	Apr	28 Jun	25 Jun	Jul	20 Jul	5 Aug	30 Jul	25 Jul	20 Aug
AMAL	---	20 May	---	May	---	---	30 Jun	10 Jun	---	---	---	10 Sep
ANDI	---	May	---	Apr	---	Jun	---	1 Jun	Jun	20 Jun	---	15 Jul
ARHO	---	May	---	May	Jun	24 May	Jun	1 Jun	5 Jul	10 Jul	Jul	1 Aug
ARTR[2]	Jun	20 May	May	May	Sep	Sep	5 Aug	1 Sep	---	---	---	Nov
ASCA	---	---	---	---	---	10 Jul	---	---	---	---	---	---
ASCI	---	May	---	---	---	6 Jun	10 Jun	1 Jun	28 Jun	25 Jun	Jul	15 Jul
ASDI	---	Apr	---	May	5 Jul	6 Jun	Jun	3 Jul	30 Jul	15 Jul	Jul	20 Aug
AST	---	---	---	---	---	10 Jun	12 Jun	---	---	20 Jul	---	---
CAS	---	12 Mar	---	May	5 Jul	30 Jun	Jun	15 Jun	25 Jul	---	Aug	20 Aug
CHVI	---	20 May	May	May	5 Aug	15 Jul	Jul	5 Aug	---	---	---	1 Oct
COPA	---	1 Jun	May	---	---	15 Jun	Jun	1 Jul	---	20 Jul	Jul	25 Aug
CORA	---	6 Jun	---	May	---	---	---	10 Aug	---	---	---	30 Aug
CRE	---	30 May	---	May	5 Jul	15 Jul	20 Jun	30 Jun	14 Aug	---	Jul	14 Jul
DEPI	---	---	---	---	---	---	---	---	20 Jun	---	---	---
ERMI	---	15 May	May	May	10 Aug	15 Jul	5 Aug	20 Aug	---	---	---	30 Oct
EROV	---	12 Mar	---	---	25 Jun	6 Jun	---	---	14 Aug	10 Jul	---	---
ERSU	---	---	---	---	---	25 Jun	---	---	---	25 Jul	---	---
MELO	---	Apr	---	Apr	5 Jul	30 May	15 Jun	15 Jun	---	Jul	---	10 Aug
OPPO	---	May	---	May	---	15 Jul	5 Jul	10 Aug	---	---	Aug	20 Sep
ORHY	---	12 Mar	---	Mar	5 Jul	30 Jun	---	10 Jun	---	---	---	20 Aug
PELA	---	---	---	---	20 Jun	15 Jun	25 Jun	---	10 Aug	15 Jul	Jul	20 Aug
PHHO	---	Mar	---	---	Jun	24 May	5 Jun	5 Jun	10 Jul	20 Jul	Jul	10 Jul
PHLO	---	Mar	---	May	Jun	6 Jun	15 Jun	15 Jun	10 Jul	20 Jul	Jul	10 Jul
POFE	---	Mar	---	Apr	Jun	15 Jun	Jul	15 Jun	25 Jul	10 Jul	25 Jul	1 Aug
POSE	---	Mar	---	Apr	2 Jul	30 Jun	30 Jun	10 Jun	15 Jul	5 Jul	Jul	15 Jul
SIHY	---	---	---	---	5 Jul	1 Jul	---	---	30 Jul	30 Jul	25 Jul	10 Aug
STCO	---	---	---	Apr	---	Jun	Jun	Jun	---	Jul	Jul	15 Jul
TECA	---	24 May	---	May	10 Aug	10 Jul	5 Aug	1 Aug	---	---	---	30 Sep
TRI	---	---	---	May	---	30 May	---	---	28 Jun	20 Jun	---	---
UMB	---	---	---	Apr	---	---	---	1 Jun	Jul	6 Jun	---	1 Jul
VIVA	---	---	May	---	---	---	Jun	---	---	Jun	Jul	---
ZYPA	---	12 Mar	---	Mar	---	8 Jun	12 Jun	10 Jun	Jun	15 Jun	Jun	20 Jul

TABLE V. (Continued)

Exclosure		Growth Initiation				Full Bloom				Seed Dissemination			
	Species	1973	1974	1975	1976	1973	1974	1975	1976	1973	1974	1975	1976
Demer													
	AGSM	---	5 Mar	5 Mar	Mar	20 Jun	25 Jun	5 Jul	---	1 Nov	15 Aug	20 Aug	20 Aug
	AGSP	---	5 Mar	1 Mar	Mar	10 Jun	25 Jun	1 Jul	15 Jun	1 Aug	30 Jul	5 Aug	30 Aug
	ALTE	---	---	Apr	---	---	---	10 Jun	---	---	---	10 Jul	---
	ARTR	---	20 May	22 Apr	Apr	10 Sep	20 Sep	10 Sep	5 Sep	15 Nov	15 Nov	10 Nov	Nov
	BOGR	---	30 Mar	25 Apr	Apr	5 Aug	5 Jul	15 Jul	12 Jul	10 Aug	30 Jul	5 Aug	20 Aug
	BRTE	---	---	Mar	Mar	---	10 Jun	12 Jun	15 Jun	24 Jun	5 Jul	10 Jul	30 Jul
	CHEN	---	---	Apr	---	---	---	---	---	---	---	1 Oct	---
	CIR	---	---	Apr	May	---	---	---	---	---	---	---	---
	CYMO	---	---	Mar	---	---	---	1 Jun	---	---	---	20 Jun	---
	DEGE	---	25 Mar	5 May	Apr	30 Jul	10 Jun	20 Jun	15 Jun	1 Aug	10 Jul	20 Jul	15 Jul
	ERPU	---	Mar	---	---	---	---	---	---	---	---	---	---
	LARE	---	---	May	May	---	5 Jun	15 Jun	28 May	Jul	15 Jul	20 Jul	20 Jul
	LEDE	---	---	May	May	---	---	---	Jun	---	---	20 Jul	25 Jul
	LUPU	---	---	20 May	---	---	---	25 Jun	---	---	---	20 Jul	---
	OPPO	---	28 Mar	---	Apr	---	25 Jun	---	Jun	Aug	10 Aug	---	30 Jul
	ORHY	---	---	5 Mar	Mar	5 Jun	---	10 Jun	Jul	20 Jul	---	20 Jul	Aug
	PLSP	---	---	Mar	May	---	5 Jun	15 Jun	25 Jun	10 Jun	15 Jul	29 Jul	10 Aug
	POSE	---	1 Mar	1 Mar	Mar	1 Jun	10 Jun	15 Jun	25 Jun	1 Jul	1 Jul	1 Jul	10 Aug
	SAKA	Jun	---	---	Jun	---	---	---	---	Jul	---	---	---
	SIHY	---	5 Mar	1 Mar	Mar	---	25 Jun	15 Jun	15 Jun	2 Aug	25 Jul	30 Jul	30 Jul
	SILI	---	---	Apr	May	---	---	May	10 Jul	---	---	20 Jul	10 Aug
	SPCO	---	25 Apr	30 Apr	May	5 Jul	20 Jun	1 Jul	---	30 Jul	15 Jul	25 Jul	---
	STCO	---	5 Mar	5 Mar	Mar	5 Jun	25 Jun	25 Jun	25 Jun	15 Jun	25 Jul	20 Jul	30 Jul
	VUOC	---	---	May	May	---	10 Jun	12 Jun	25 Jun	---	20 Jun	Jul	30 Jul
Farson													
	AGSM	---	30 Mar	26 Apr	Apr	20 Jul	15 Jul	---	15 Jul	15 Oct	21 Sep	15 Oct	10 Sep
	ALTE	---	---	---	Apr	---	---	25 Jun	25 May	---	---	Jul	10 Aug
	ARHO[2]	---	---	May	May	---	---	---	10 Jul	---	---	---	10 Aug
	ARTR	---	20 May	10 May	15 May	10 Sep	21 Sep	10 Sep	10 Sep	15 Nov	15 Nov	15 Nov	Nov
	ASPU	---	15 Mar	30 Apr	Apr	Jun	23 May	10 Jun	20 Jun	Jun	30 Jun	20 Jun	5 Aug
	ASSP	---	15 Mar	30 Apr	---	---	27 Apr	---	---	---	15 Jun	---	---
	ATCO	---	27 Apr	26 Apr	Apr	20 Jul	10 Aug	20 Jun	Jul	15 Oct	Oct	Oct	Aug
	CAEL	---	15 Apr	20 May	Apr	---	25 May	---	20 May	---	10 Jul	---	5 Aug
	CHER	---	Apr	---	---	15 Aug	---	---	---	---	15 Jul	---	---
	CHVI	May	Apr	15 May	25 Apr	15 Aug	24 Aug	10 Aug	5 Aug	15 Oct	25 Sep	Sep	20 Sep
	CYMO	---	---	May	Apr	---	---	Jun	---	---	---	Jul	---
	EROV	---	Apr	10 May	5 May	5 Jul	10 Jun	15 Jun	10 Jul	25 Jul	10 Jul	Jul	20 Aug
	EULA	---	27 Apr	30 Apr	15 May	10 Aug	10 Sep	30 Jul	---	20 Oct	25 Oct	Oct	---
	GACO	---	---	Apr	---	---	---	---	---	---	---	---	---
	GRSP	---	Apr	15 May	25 Apr	---	---	5 Jun	25 Jul	---	10 Nov	1 Aug	20 Sep
	HAAC	---	Apr	10 May	Apr	---	---	20 Jun	Jul	---	20 Jun	Jul	20 Aug
	KOCR	---	---	15 May	Apr	---	---	---	20 Jun	---	---	---	20 Aug
	LEPU	---	---	May	---	---	---	---	---	---	---	Aug	---
	OPPO	May	27 Apr	10 May	Apr	25 Jul	10 Jul	Jul	5 Jul	Sep	24 Aug	15 Aug	15 Aug
	ORHY	---	15 Apr	5 May	Apr	Jun	25 Jun	5 Jul	10 Jul	15 Oct	15 Jul	30 Jul	10 Aug
	PECL	---	---	30 Apr	May	---	6 Jun	15 Jun	5 Jun	---	Jul	Jul	1 Aug
	PHHO	May	30 Mar	5 May	Apr	---	5 Jun	10 Jun	1 Jun	27 Jun	5 Jul	Jul	10 Aug
	POSE	---	15 Apr	5 May	Mar	Jun	6 Jun	20 Jun	25 Jun	20 Jul	20 Jul	20 Jul	5 Aug
	SIHY	---	30 Mar	30 Apr	Apr	27 Jun	25 Jun	5 Jul	10 Jul	10 Aug	15 Jul	5 Aug	20 Aug
	SILI	May	Apr	May	Apr	---	5 Jun	5 Jun	May	10 Jul	Jul	5 Jul	Jul
	SPCO	---	10 May	5 May	May	---	10 Jun	5 Jul	Jun	---	10 Aug	30 Jul	20 Aug
	STCO	---	15 Apr	5 May	Apr	10 Jul	30 Jun	10 Jul	Jul	10 Aug	15 Jul	30 Jul	15 Aug

TABLE V. (continued)

Exclosure	Growth Initiation				Full Bloom				Seed Dissemination			
Species	1973	1974	1975	1976	1973	1974	1975	1976	1973	1974	1975	1976
Upper Gov't Draw												
AGSM	---	Mar	Mar	Apr	10 Jul	Jul	10 Jul	Jul	Aug	25 Aug	Aug	Aug
ALTE	---	---	---	Apr	Jun	Jun	20 Jun	10 Jun	Jun	1 Jun	Jul	25 Jul
ARLI	---	---	May	May	---	---	30 May	5 Jun	---	---	Jun	10 Jul
ARTR	---	May	May	May	Aug	22 Aug	Aug	18 Sep	Nov	Nov	Nov	Nov
ASPU	---	---	May	Apr	---	---	May	1 Jun	---	---	Jun	5 Jul
BRTE	---	---	Jun	Apr	---	---	30 Jun	Jun	---	---	25 Jul	25 Jul
CAS	---	---	---	May	5 Jul	10 Jul	5 Jun	20 Jun	25 Jul	Jul	25 Jul	25 Jul
CHVI	---	May	May	May	15 Aug	22 Aug	Aug	20 Sep	---	Sep	Sep	Oct
CRMO	---	---	---	Apr	---	10 Jun	10 Jun	10 Jun	20 Jul	15 Jun	20 Jul	5 Jul
CYMO	---	---	May	Apr	---	---	Jun	May	---	---	24 Jun	5 Jun
DEPI	---	---	May	May	---	---	15 Jun	Jun	---	---	20 Jul	5 Aug
ERI	---	---	---	---	---	---	---	---	Jul	19 Jun	---	---
ERPU	---	---	Jun	May	---	---	25 Jun	15 Jul	---	---	25 Jul	5 Aug
EULA	---	---	May	---	10 Jul	---	---	---	Aug	---	---	---
KOCR	---	Mar	Mar	Apr	Jul	20 Jun	30 Jun	20 Jun	25 Jul	Jul	30 Jul	10 Aug
LARE	---	---	Jun	Apr	---	---	24 Jun	15 Jun	---	---	Jul	10 Aug
LEDE	---	---	Jun	---	---	---	Jun	---	---	---	1 Aug	---
LERE	---	---	Jun	---	---	---	25 Jun	---	---	---	Jul	---
MAGL	---	---	May	---	---	---	30 Jun	---	---	---	25 Jul	---
OPPO	---	May	May	May	5 Jul	Jul	Jul	25 Jun	30 Aug	Aug	Aug	Aug
PECL	---	---	Jun	May	---	20 Jun	24 Jun	Jun	---	Jul	Aug	1 Jul
PHHO	---	---	Apr	Apr	Jun	5 Jun	1 Jun	May	Jul	Jul	Jul	1 Jul
PLSP	---	---	Jun	---	---	---	Jul	---	---	---	30 Jul	---
POSE	---	Mar	Mar	Apr	---	10 Jun	30 Jun	20 Jun	Jul	Jul	Jul	10 Aug
SIHY	---	Mar	---	---	---	Jul	---	---	25 Jul	20 Aug	---	---
SPCO	---	May	May	Apr	30 Jun	15 Jun	Jun	Jun	Aug	20 Aug	5 Aug	15 Aug
UMB	---	---	---	---	---	---	May	---	17 Jul	---	Jun	---
VIAM	---	---	Jun	May	---	---	25 Jun	---	Jul	Jul	Jul	---
VIO	---	---	May	May	---	---	Jun	May	---	---	Jul	Jun

Exclosure	Growth Initiation				Full Bloom				Seed Dissemination			
Species	1973	1974	1975	1976	1973	1974	1975	1976	1973	1974	1975	1976
Horse Creek												
AGSM	---	5 Mar	Apr	Apr	25 Jun	5 Jul	10 Jul	---	10 Nov	20 Aug	20 Aug	15 Aug
AGSP	---	5 Mar	Apr	Mar	20 Jun	30 Jun	5 Jul	10 Jun	30 Jul	10 Jul	15 Jul	30 Jul
ALTE	---	---	---	Apr	---	---	9 Jun	May	---	---	10 Jul	20 Jul
ARFE	---	15 Apr	Apr	Apr	20 Jun	10 Jul	15 Jul	Jul	1 Aug	15 Jul	20 Jul	10 Aug
ARNO	---	15 May	15 May	May	20 Sep	20 Sep	15 Sep	10 Oct	5 Nov	5 Nov	5 Nov	Nov
ARTR	---	20 May	20 May	May	10 Sep	20 Sep	20 Sep	10 Oct	20 Nov	10 Nov	5 Nov	Nov
ASPU	---	Apr	Apr	---	---	20 May	25 May	---	25 Jun	15 Jun	20 Jun	---
BRCO	---	---	Apr	---	---	25 Jun	Jun	---	2 Aug	25 Jul	20 Jul	---
BRTE	---	---	Apr	May	---	15 Jun	30 Jun	May	25 Jul	5 Jul	10 Jul	5 Jul
CANU	---	30 Mar	Apr	May	20 Jun	15 Jun	5 Jul	Jun	15 Jul	15 Jul	20 Jul	5 Aug
CAS	---	20 Mar	Apr	Apr	---	5 Jun	10 Jun	10 Jun	20 Jul	25 Jul	15 Jul	2 Jul
CHDE	---	---	---	May	---	---	5 Jul	Jun	---	---	25 Jul	Aug
COPA	---	---	May	May	---	---	30 Jun	---	---	---	Jul	20 Sep
CRE	---	---	May	Apr	---	25 May	25 Jun	10 Jun	---	Jun	Jul	10 Jul
CRP	---	---	Apr	---	30 Jun	10 Jun	10 Jun	---	2 Aug	5 Jul	10 Jul	---
CYMO	---	---	Apr	---	---	---	5 Jun	---	---	---	20 Jun	---
DEPI	---	---	---	May	30 Jun	---	5 Jun	10 Jun	Jul	---	10 Jul	10 Jul
ERPU	---	Apr	Apr	May	25 Jun	20 Jun	25 Jun	7 Jun	20 Jul	10 Jul	10 Jul	30 Jul
EULA	---	25 Apr	10 May	May	25 Jul	20 Jul	20 Jul	25 Sep	20 Sep	20 Sep	20 Sep	Nov
GACO	---	---	May	Apr	---	5 Jun	30 Jun	Jun	30 Jun	5 Aug	25 Jul	20 Aug
LARE	---	---	---	May	26 Jun	---	20 Jun	Jun	23 Jul	---	25 Jul	25 Jul
LERE	---	---	---	---	---	---	30 Jun	---	---	---	25 Jul	---
MACA	---	30 Mar	---	May	25 Jun	20 Jun	---	10 Jul	25 Jul	25 Jul	---	20 Aug
MAGR	---	---	Jun	May	---	20 Jun	Jul	---	---	Jul	---	25 Aug
OPPO	---	---	May	Apr	5 Jun	20 Jun	9 Jun	1 Jul	---	20 Aug	10 Sep	10 Aug
ORHY	---	5 Mar	Apr	May	---	5 Jun	1 Jul	Jun	5 Aug	15 Jul	25 Jul	15 Aug
PEN	---	---	Apr	Apr	---	---	15 Jul	12 Jun	---	---	30 Jul	10 Jul
PHHO	---	---	Apr	Apr	---	30 May	5 Jun	10 Jun	26 Jun	15 Jun	5 Jul	25 Jun
POSE	---	20 Feb	10 Mar	Apr	---	20 Jun	25 Jun	15 Jun	15 Jul	5 Jul	5 Jul	5 Aug
SAKA	26 Jun	20 Jun	15 Jun	Jun	---	25 Aug	5 Aug	25 Aug	---	Sep	---	Sep
SIHY	---	5 Mar	Apr	May	20 Jun	1 Jul	5 Jul	10 Jun	5 Aug	10 Jul	15 Jul	30 Jul
SPCO	---	---	---	May	---	5 Jul	5 Jul	10 Jun	1 Aug	25 Jul	25 Jul	25 Jul
STCO	---	10 Mar	Apr	May	20 Jun	1 Jul	1 Jul	15 Jun	5 Aug	15 Jul	15 Jul	15 Aug
TRDU	---	20 May	15 May	Apr	---	15 Jun	30 Jun	Jun	---	15 Jul	15 Jul	15 Jul
VIO	---	5 Mar	---	Apr	---	20 Jun	25 Jun	Jun	25 Jun	10 Jul	10 Jul	15 Jul
ZYVE	---	20 Apr	Apr	Apr	---	30 May	30 May	23 May	10 Jul	10 Jul	10 Jul	20 Jun
Mesa Antelope												
AGSM	---	30 Mar	Mar	Apr	Jul	Jul	Jul	---	Sep	Aug	10 Aug	---
ANRO	---	---	Jun	---	---	---	---	---	---	---	---	---
ARHO	---	---	---	May	Jun	---	15 Jun	Jun	Jul	---	Jul	5 Aug
ARTR^2	May	23 May	May	May	10 Sep	20 Sep	10 Sep	10 Sep	14 Oct	5 Nov	5 Nov	10 Nov
ASPU	---	---	---	---	---	---	15 Jun	---	---	---	Jul	---
ASSP	---	---	---	May	---	---	15 Jun	---	---	---	Jul	Oct
ATGA	---	---	---	May	1 Aug	---	---	25 Jul	---	---	---	30 Sep
CAEL	---	May	May	Apr	Jun	Jun	Jun	20 Jun	Jul	Jul	Jul	Aug
CHVI	May	23 May	May	May	10 Sep	Sep	1 Sep	30 Aug	14 Oct	Oct	Oct	Oct
ERCA	---	Mar	---	Apr	---	25 May	15 Jun	20 Jul	10 Aug	20 Jun	Jul	Oct
EROV^2	---	Mar	---	May	Jun	30 May	20 Jun	13 Jul	25 Jul	Jul	Jul	Oct
EULA	May	20 May	May	May	1 Aug	Aug	Jul	25 Aug	Oct	Oct	25 Oct	Oct
HAAC	---	---	---	Apr	---	---	15 Jun	12 Jun	Jul	---	Jul	13 Jul
LEPU	---	May	May	---	Jun	15 Jun	30 Jun	---	Jul	Jul	10 Aug	---
MACA	May	---	---	Jun	15 Aug	1 Jun	20 Jun	20 Aug	---	Oct	1 Oct	5 Sep

TABLE V. (Continued)

Exclosure	Growth Initiation				Full Bloom				Seed Dissemination			
Species	1973	1974	1975	1976	1973	1974	1975	1976	1973	1974	1975	1976
Mesa Antelope (cont'd)												
OPPO	---	May	---	May	1 Aug	Jul	Jul	20 Jul	Sep	Sep	Aug	30 Sep
ORHY	---	30 Mar	---	Apr	10 Jul	30 Jun	5 Jul	1 Jul	10 Aug	---	1 Aug	20 Aug
PELA	---	---	---	May	17 Jul	Jul	---	22 Jul	---	---	---	20 Aug
PHHO	---	30 Mar	---	Apr	---	23 May	15 Jun	10 Jun	20 Jul	20 Jun	30 Jul	30 Jul
POSE	---	Mar	---	Apr	20 Jun	10 Jun	30 Jun	20 Jun	1 Aug	---	Jul	20 Aug
SIHY	---	Mar	---	Apr	Jul	Jul	Jul	1 Jul	5 Aug	---	4 Aug	15 Aug
SILI	---	---	---	Apr	30 Jun	---	Jun	20 Jun	10 Jul	---	---	10 Aug
STCO	---	30 Mar	---	Apr	10 Jul	Jul	Jul	1 Jul	15 Aug	---	Jul	1 Aug
TRI	---	---	---	Apr	---	---	5 Jun	---	15 Jul	---	20 Jun	---
Owl Draw												
AGSM	---	---	Apr	Apr	16 Jul	5 Jul	17 Jul	17 Jul	---	5 Aug	25 Jul	Oct
AGSP	---	---	Apr	Mar	5 Jul	5 Jul	14 Jul	Jul	3 Aug	25 Jul	28 Jul	25 Aug
ARHO	---	---	May	Jun	---	1 Jun	15 Jul	14 Jul	---	20 Jun	30 Jul	2 Aug
ARHO$_2$	---	---	---	May	---	---	Jun	Jun	---	Jul	25 Jul	30 Jul
ARNO	---	30 May	May	May	---	20 Sep	20 Sep	5 Sep	---	---	---	Nov
ARTR	---	30 May	May	May	---	20 Sep	20 Sep	5 Sep	---	---	---	Nov
ASPU	---	---	Apr	Apr	---	May	25 May	10 Jun	---	Jul	20 Jul	25 Jul
AST$_1$	---	---	Apr	Apr	---	Jun	10 Jun	10 Jun	---	Jul	30 Jul	10 Aug
ASDR	---	---	Apr	Apr	---	Jun	10 Jun	15 Jul	---	Jul	10 Jul	25 Aug
ASMI	---	---	Apr	Apr	---	Jun	10 Jun	Jul	---	Jul	10 Jul	15 Aug
BASA	---	5 Jun	1 Jun	May	---	Jun	Jun	Jun	---	Jul	Jul	12 Jul
CAMI	---	---	---	---	---	---	---	---	---	Jul	14 Jul	---
CANU	---	May	May	May	16 Jul	5 Jul	14 Jul	1 Jul	---	10 Aug	Aug	10 Aug
CAS	---	---	---	Apr	---	---	6 Jun	25 Jun	---	Jul	28 Jul	25 Jul
CHVI	---	May	May	May	Aug	Aug	Aug	25 Aug	---	Sep	25 Sep	10 Oct
CRBR	---	---	---	---	---	Jun	Jun	---	---	Jul	Jul	---
CRAC	---	May	May	May	---	Jun	Jun	Jun	---	Jul	14 Jul	17 Jul
CYMO	---	---	---	May	---	Jun	5 Jun	10 Jun	---	Jun	1 Jul	20 Jul
DEPI	---	Jun	---	---	Jul	Jun	---	---	---	Jul	---	---
DOPU	---	---	---	May	---	---	---	Jun	---	---	---	Jul
EROC	---	---	---	May	---	---	10 Jun	5 Jun	---	---	20 Jul	21 Jul
EULA	---	---	May	May	---	Jun	5 Jul	30 Jul	---	Sep	20 Sep	Sep
HAAC	---	May	May	May	---	10 Jun	15 Jun	Jun	Jul	10 Jul	5 Jul	20 Jul
JUOS	---	May	May	May	---	Jul	5 Jul	15 Jul	---	Aug	Aug	Oct
JUSC	---	May	May	May	---	Jul	5 Jul	15 Jul	---	Aug	Aug	Oct
KOCR	---	---	Apr	Apr	Jul	5 Jun	Jun	Jun	1 Aug	15 Jun	20 Jul	20 Aug
LERE	---	---	---	May	20 Jul	20 Jun	5 Jul	Jun	Aug	10 Jul	20 Jul	15 Jul
LILE	---	May	May	Jun	---	Jun	25 Jun	1 Jul	---	Jul	25 Jul	10 Aug
MAVI	---	---	---	---	---	Jul	1 Jul	---	---	Jul	Jul	---
MAGR	---	May	May	Jun	---	15 Jun	10 Jun	Jun	20 Jul	Jul	Jul	10 Aug
OPPO	---	---	May	May	---	Jun	Jun	10 Jul	---	Aug	Aug	10 Jul
ORHY	---	---	Apr	Apr	---	25 Jun	Jun	10 Jul	---	10 Jul	25 Jul	5 Aug
PEN	---	---	May	May	---	Jun	30 Jun	1 Jul	---	Jul	20 Jul	15 Aug
PHHO	---	---	May	May	---	1 Jun	1 Jun	5 Jun	---	25 Jun	10 Jul	15 Jul
POFE	---	---	Apr	Apr	---	15 Jun	10 Jun	10 Jun	20 Jul	10 Jul	Jul	30 Jul
POSE	---	---	Apr	Apr	---	17 Jun	10 Jun	8 Jun	20 Jul	10 Jul	Jul	26 Jul
SELA	---	---	---	Apr	---	---	30 Jun	1 Jul	---	Jul	25 Jul	25 Aug
SECA	---	---	May	Apr	10 Jul	10 Jun	15 Jun	3 Jun	---	---	---	12 Jul
STCO	---	---	Apr	Apr	---	25 Jun	25 Jun	25 Jun	---	10 Jul	15 Jul	30 Jul

TABLE V. (Continued)

Exclosure	Growth Initiation				Full Bloom				Seed Dissemination			
Species	1973	1974	1975	1976	1973	1974	1975	1976	1973	1974	1975	1976
Owl Draw (cont'd)												
TRDU	---	---	---	Jun	---	---	Jun	20 Jul	---	---	5 Jul	26 Jul
TRI	---	---	---	Apr	---	---	Jun	5 Jun	---	---	1 Jul	Jul
VIAM	---	---	May	May	---	10 Jun	15 Jun	Jun	10 Jul	15 Jun	5 Jul	Jul
Red Wash #2												
AGSM	---	30 Mar	Mar	Apr	Jul	Jul	Jul	Jul	Aug	5 Aug	Aug	10 Aug
AGSP	---	28 Mar	Mar	Mar	Jul	Jul	Jul	15 Jun	Aug	30 Jul	Aug	10 Sep
ALTE	---	May	---	May	---	5 Jun	15 Jun	10 Jun	Jul	Jul	25 Jul	10 Jul
ARCO	---	---	---	---	---	---	25 Jun	---	---	---	---	---
ARHO	---	30 Mar	---	Jun	30 Jun	5 Jun	5 Jul	15 Jul	Jul	20 Jun	Aug	10 Aug
ARNO	---	May	---	---	---	Aug	---	---	---	Oct	---	---
ARTR	---	May	May	May	---	Aug	Aug	10 Sep	---	Oct	Oct	Nov
ASDI	---	---	May	Apr	---	1 Jun	Jul	15 Jun	---	Aug	Jul	18 Aug
ASKE	Jun	May	---	May	---	1 Jun	---	18 Aug	---	Aug	---	Oct
ASPU	---	May	May	Apr	20 Jun	7 Jun	1 Jun	30 May	Jul	20 Jun	Jul	20 Jul
CHDO	---	30 Mar	May	Apr	30 Jul	7 Jun	Jul	30 Jun	---	1 Aug	---	15 Aug
CHNA	---	1 Jun	Jun	May	Aug	Aug	---	30 Aug	---	---	---	Oct
CHVI	---	May	Jun	May	Aug	Aug	Aug	10 Aug	---	---	---	Oct
CRFL	---	May	May	May	30 Jun	20 Jun	26 Jun	12 Jul	---	5 Aug	Jul	18 Aug
DEPI	---	May	---	---	---	Jun	---	---	---	Jul	---	---
ERAS	---	May	May	Apr	20 Jun	5 Jun	13 Jun	15 Jun	---	30 Jul	Jul	20 Jul
ERMI	---	May	---	May	---	5 Jul	---	22 Jul	---	Aug	---	25 Sep
EROV	---	May	May	May	25 Jun	30 Jun	30 Jun	20 Jun	5 Aug	Jul	Jul	24 Aug
EULA	---	May	May	May	---	5 Aug	Aug	25 Aug	---	---	---	Oct
GIAG	---	---	---	Apr	25 Jun	15 Jun	---	10 Jun	---	15 Aug	---	15 Jul
GRSP	---	May	May	May	Jun	5 Aug	5 Aug	10 Jul	Jul	---	30 Jul	---
HAAC	---	Mar	---	Apr	25 Jun	5 Jun	20 Jun	10 Jun	---	Jul	Jul	1 Aug
LEPU	---	---	---	May	28 Jun	15 Jun	30 Jun	15 Jul	Jul	5 Aug	25 Jul	18 Aug
MACA	---	---	---	May	---	10 Aug	---	18 Aug	---	Aug	---	Oct
OPPO	---	---	---	May	---	Jul	Jul	Jul	---	25 Jul	Aug	1 Sep
ORFA	---	May	---	May	---	10 Jun	---	Jun	---	30 Jun	---	5 Jul
ORHY	---	11 Mar	Mar	Apr	10 Jul	5 Jul	5 Jul	Jun	5 Aug	30 Jul	25 Jul	6 Aug
PEN	---	Mar	---	Apr	30 Jun	15 Jun	30 Jun	20 Jun	Aug	Aug	Aug	6 Aug
PHHO	---	Mar	---	Apr	---	1 Jun	5 Jun	10 Jun	Jun	20 Jun	25 Jun	20 Jul
POSE	---	11 Mar	Mar	Apr	Jun	25 Jun	Jun	Jun	Jul	Aug	Jul	18 Aug
SIHY	---	30 Mar	Mar	Apr	---	Jul	Jul	30 Jun	---	30 Jul	30 Jul	18 Aug
SILI	---	---	---	May	20 Jun	1 Jun	20 Jun	10 Jun	Jul	15 Jun	Jul	18 Aug
STCO	---	Mar	20 Mar	Apr	Jul	Jul	Jul	30 Jun	Aug	Jul	Jul	20 Aug
TEGA	---	May	May	May	Aug	Jul	5 Aug	23 Jul	Aug	Aug	Aug	20 Sep

TABLE V. (Continued)

Exclosure	Growth Initiation				Full Bloom				Seed Dissemination			
Species	1973	1974	1975	1976	1973	1974	1975	1976	1973	1974	1975	1976
Shoshoni Ant #7												
AGSM	---	28 Mar	5 Apr	Apr	5 Jul	15 Jul	18 Jul	15 Jul	Oct	30 Oct	30 Oct	1 Oct
ALTE	---	---	May	Apr	Jun	Jun	15 Jun	May	30 Jun	15 Jun	30 Jun	15 Jun
ARTR	---	22 May	May	May	15 Sep	10 Oct	10 Oct	Sep	9 Nov	9 Nov	1 Nov	Nov
ASPU	---	5 Mar	Mar	---	Jun	5 Jun	20 May	---	15 Jul	15 Jun	10 Jul	---
BOGR	---	15 Apr	15 Apr	Apr	7 Aug	20 Jul	20 Jul	6 Jul	9 Nov	10 Nov	Nov	Sep
BRTE	---	5 Mar	Apr	May	---	10 Jun	30 Jun	10 Jun	5 Jul	10 Jul	10 Jul	6 Jul
CYMO	---	---	---	---	---	---	30 May	---	---	---	20 Jun	---
DEPI	---	---	---	May	---	---	---	May	---	---	10 Jul	1 Jul
ERPU	---	21 Feb	Mar	Apr	27 Jun	30 May	30 Jun	17 Jun	15 Jul	15 Jun	20 Jul	25 Jul
EULA	---	---	---	---	30 Jul	---	---	---	Sep	---	---	---
LARE	---	---	---	---	---	---	---	---	Jul	---	---	---
LEDE	---	---	---	---	---	---	---	---	5 Jul	---	20 Jul	---
LUPU	---	---	---	May	---	---	25 Jun	15 Jun	---	---	25 Jul	1 Jul
MACA	---	---	---	---	---	---	25 Jun	---	---	---	Jul	---
OPPO	---	20 Apr	Apr	Apr	5 Jul	20 Jun	5 Jul	Jun	15 Aug	---	Aug	Aug
ORHY	---	5 Mar	5 Apr	Apr	Jun	10 Jun	30 Jun	Jun	5 Aug	15 Jul	15 Jul	30 Jul
PHHO	---	5 Mar	10 Apr	Apr	---	10 May	30 May	May	25 Jun	5 Jul	5 Jul	10 Jul
PLPA	---	5 Mar	Apr	---	1 Jul	5 Jun	25 Jun	---	1 Aug	15 Jul	25 Jul	---
POSE	---	21 Feb	30 May	Apr	Jun	10 Jun	10 Jun	15 Jun	30 Jun	5 Jul	30 Jun	10 Aug
SIHY	---	25 Mar	25 Mar	Apr	Jun	25 Jun	30 Jun	Jun	5 Aug	15 Jul	5 Aug	10 Aug
SILI	---	---	---	---	---	---	30 May	---	---	---	5 Jul	---
SPCO	---	25 Apr	Apr	Apr	5 Jul	20 Jun	30 Jun	---	1 Aug	15 Jul	25 Jul	---
STCO	---	5 Mar	Mar	Mar	Jun	5 Jul	5 Jul	Jul	5 Aug	15 Jul	20 Jul	5 Aug
Sweetwater												
ARFR	---	28 Mar	5 Apr	Apr	5 Sep	Aug	Aug	25 Aug	Nov	Oct	Oct	Oct
AGSM	---	28 Mar	Apr	Apr	12 Jul	10 Jul	5 Jul	---	15 Sep	15 Sep	30 Jul	---
ALTE	---	---	---	---	---	---	15 Jun	---	---	---	25 Jul	---
ARHO	---	---	---	Apr	---	20 Jun	20 Jun	5 Jul	---	25 Jul	---	1 Aug
ARHO$_2$	---	20 Apr	---	Apr	---	25 May	30 May	25 May	---	30 Jun	---	25 Jun
ARNO	---	22 May	20 May	May	15 Sep	20 Sep	20 Sep	15 Sep	5 Nov	25 Oct	25 Oct	Nov
ARTR	---	22 May	20 May	May	15 Sep	15 Sep	20 Sep	19 Sep	10 Nov	30 Oct	25 Oct	Nov
ASDI	---	1 Jun	---	---	---	20 Jul	Jul	---	---	Aug	Aug	---
ASPU	---	20 Mar	5 Apr	Apr	1 Jul	5 Jun	15 Jun	2 Jun	12 Jul	10 Jun	Jun	15 Jul
ASSP	---	25 Mar	5 Apr	Apr	1 Jul	19 Jun	30 Jun	15 Jun	Aug	25 Jul	25 Jul	25 Aug
CAFI	---	28 Mar	Apr	Apr	---	30 May	15 Jun	12 Jul	20 Aug	5 Jul	5 Jul	19 Sep
CANU	---	15 May	10 May	---	20 Jun	19 Jun	Jun	---	5 Jul	5 Jul	---	---
CHDO	---	1 Jun	---	---	---	20 Jun	20 Jun	---	---	10 Jul	25 Jul	---
CHNA	---	25 Apr	30 Apr	May	Sep	Sep	Sep	19 Sep	Oct	Oct	Oct	Nov
CHVI	May	20 Apr	May	May	10 Sep	10 Aug	Aug	15 Sep	30 Oct	---	Oct	Nov
COPA	---	---	---	Apr	29 Jun	5 Jun	20 Jun	10 Jun	Jul	20 Jul	20 Jul	10 Aug
CRP	---	25 Mar	1 Mar	Apr	29 Jun	22 May	30 Jun	1 Jul	10 Aug	Aug	25 Jul	20 Aug
CYMO	---	---	May	Apr	---	---	5 Jun	17 May	---	---	20 Jun	15 Jun
DEGE	---	25 Mar	5 Apr	Apr	20 Jun	25 Jun	15 Jun	May	12 Jul	30 Jun	15 Jul	20 Jul
ERLA	---	---	May	---	---	---	15 Jun	---	---	---	---	---
EROV	---	20 Apr	May	May	20 Jun	25 May	15 Jun	15 Jun	5 Jul	10 Jul	10 Jul	Aug
ERPU	---	25 Mar	5 Apr	---	29 Jun	15 Jun	Jun	---	5 Jul	5 Jul	10 Jul	---
KOCR	---	28 Mar	Apr	Apr	25 Jun	20 Jun	20 Jun	20 Jun	25 Aug	15 Jul	15 Jul	10 Aug
LEAL	---	---	---	---	---	1 Jun	25 Jun	---	---	29 Jul	25 Jul	---
LEPU	---	20 May	May	Apr	30 Jun	19 Jun	30 Jun	5 Jul	Jul	1 Aug	20 Jul	10 Aug
MAGR	---	---	---	May	---	---	Jul	20 Aug	---	---	Aug	Sep
OECA	---	---	---	---	---	---	20 Jun	---	---	---	Jul	---

TABLE V. (Continued)

Exclosure	Growth Initiation				Fall Bloom				Seed Dissemination			
Species	1973	1974	1975	1976	1973	1974	1975	1976	1973	1974	1975	1976
Sweetwater (cont'd)												
OPPO	---	25 Apr	May	Apr	15 Jul	5 Jul	10 Jul	30 Jul	Sep	Aug	---	Sep
ORFA	---	---	---	---	---	20 Jun	Jul	---	---	15 Jul	---	---
ORHY	---	28 Mar	Apr	Mar	20 Jun	20 Jun	30 Jun	Jun	5 Sep	10 Jul	10 Jul	15 Jul
OXLA	---	20 Mar	30 Mar	---	---	10 Jun	25 Jun	---	Aug	Aug	25 Jul	---
PECL	---	May	---	Apr	30 Jun	20 Jun	25 Jun	Jun	20 Jul	10 Jul	5 Aug	30 Jul
PHHO	---	---	---	Apr	30 Jun	22 May	30 May	May	12 Jul	5 Jul	Jul	2 Jun
POSE	---	25 Mar	Apr	---	15 Jun	20 Jun	---	---	5 Jul	5 Jul	---	---
PSTE	---	20 May	---	May	---	---	---	Jul	---	Aug	---	Aug
SPCO	---	28 Mar	5 Apr	Apr	---	25 Jun	30 Jun	Jul	Aug	5 Jul	---	Aug
STCO	---	28 Mar	Apr	Mar	25 Jun	25 Jun	30 Jun	25 Jun	5 Sep	10 Jul	10 Jul	1 Aug
TECA	---	28 Mar	5 Apr	Apr	1 Aug	1 Aug	1 Aug	5 Aug	Oct	15 Oct	15 Oct	19 Sep
TOIN	---	---	May	Apr	---	10 Jun	15 Jun	10 Sep	---	10 Jul	Aug	Oct
VIVA	---	5 May	---	---	---	25 May	1 Jun	---	---	15 Jun	---	---
ZYVE	---	28 Mar	5 Apr	Apr	---	30 May	5 Jun	May	---	5 Jul	30 Jun	25 Jun

FIGURE 1. Phenological development averages for each principal species in all study areas for 1976

Page

Agropyron smithii. 225
Agropyron spicatum 226
Artemisia nova 228
Artemisia tridentata 228
Average for all species. 229

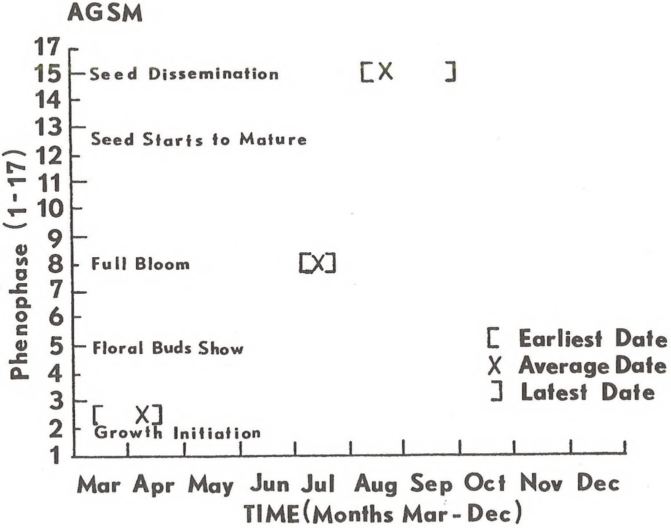

FIGURE 1. Phenological development averages for each principal species in all study areas for 1976.

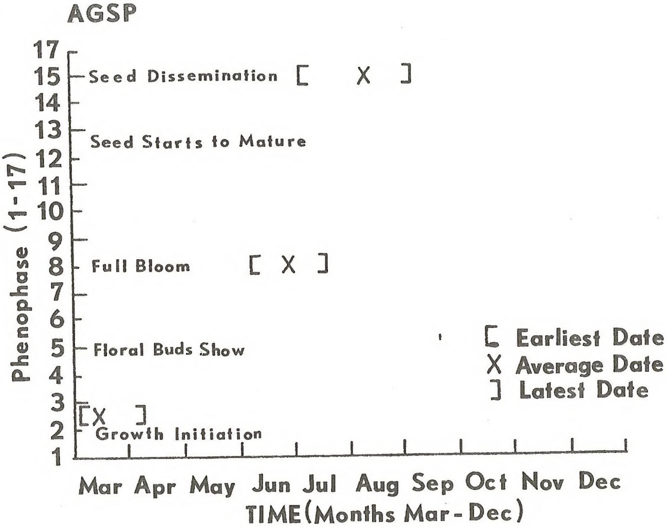

FIGURE 1. Continued

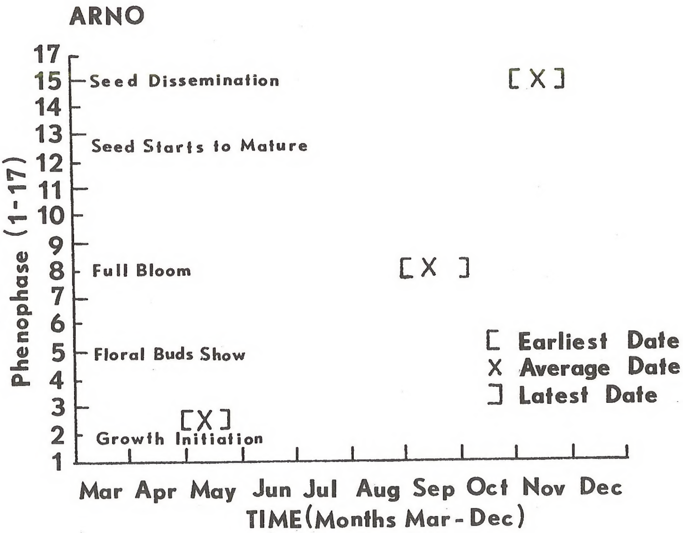

FIGURE 1. Continued

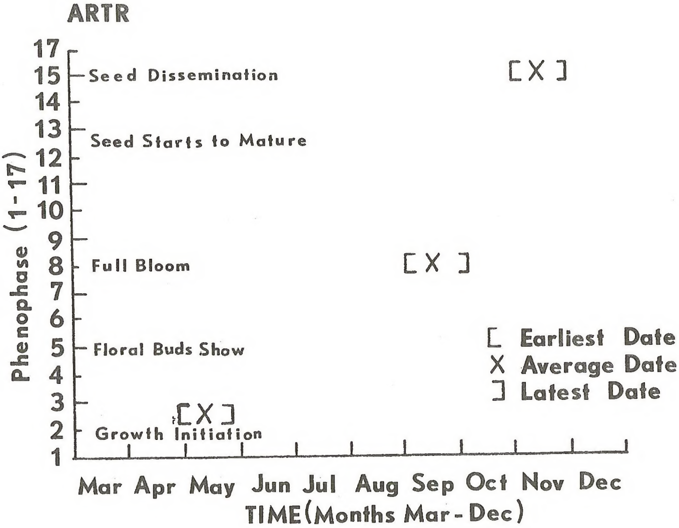

FIGURE 1. Continued

Figure 1. The average developmental events for *Agropyron smithii*, *A. spicatum*, *Artemisia nova*, and *A. tridentata* for 1976

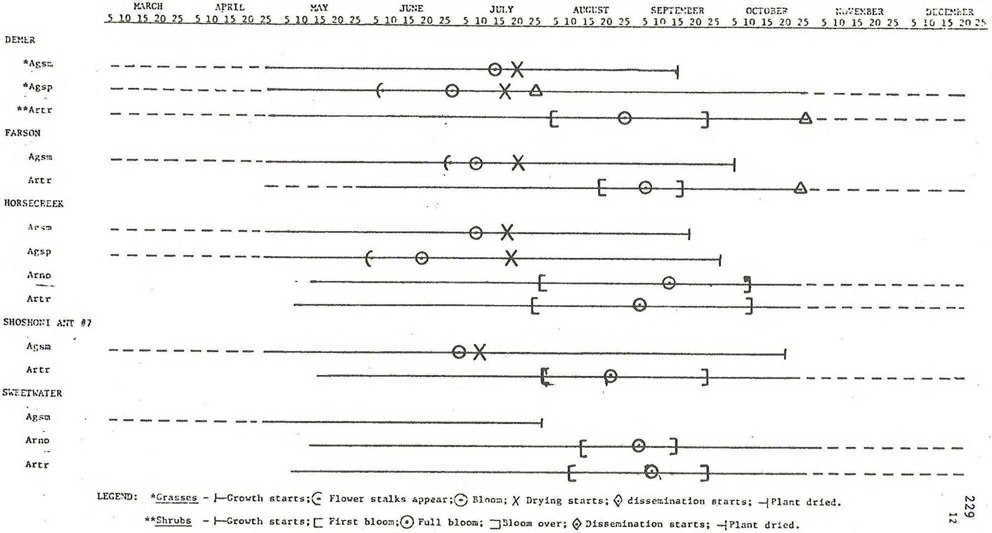

FIGURE 2. Phenological progression curves for each species.

	Page
Agropyron smithii	231
Agropyron spicatum	242
Artemisia nova	248
Artemisia tridentata	251

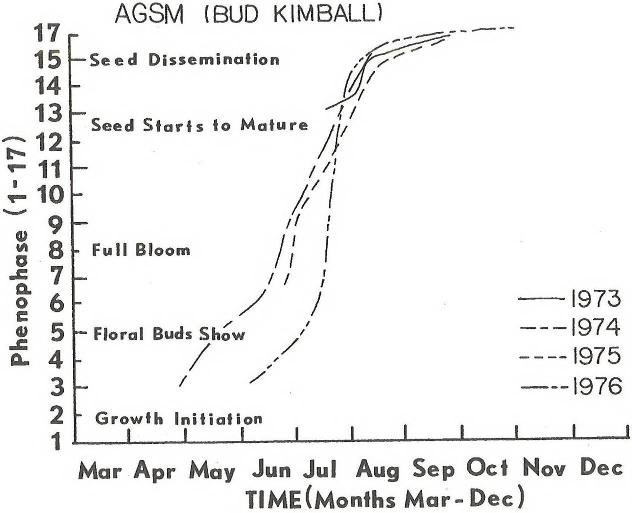

FIGURE 2. Phenological progression curves for each species.

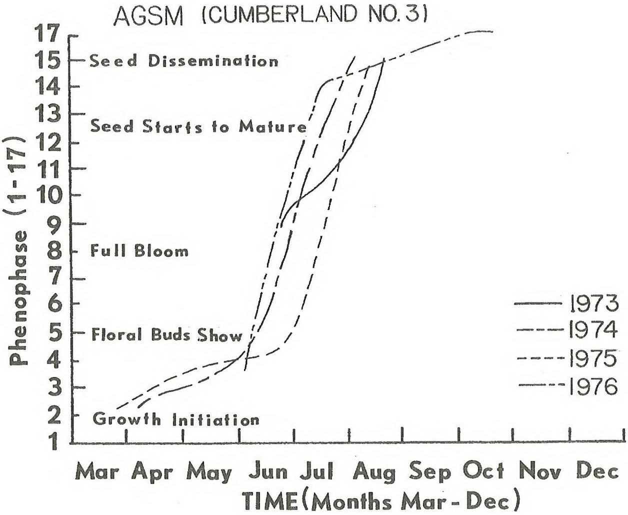

FIGURE 2. Continued

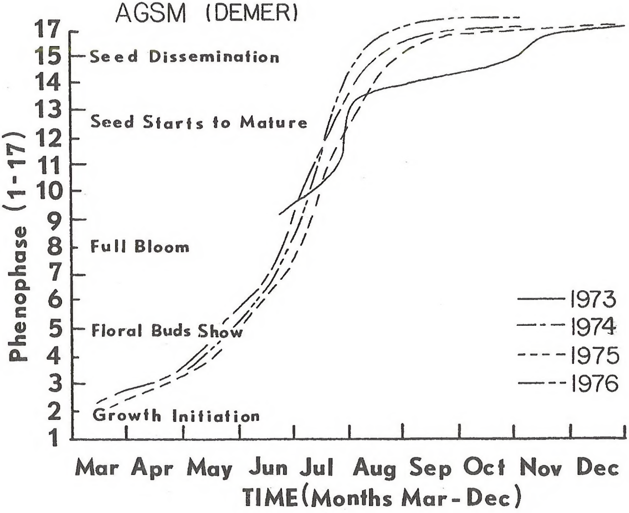

FIGURE 2. Continued

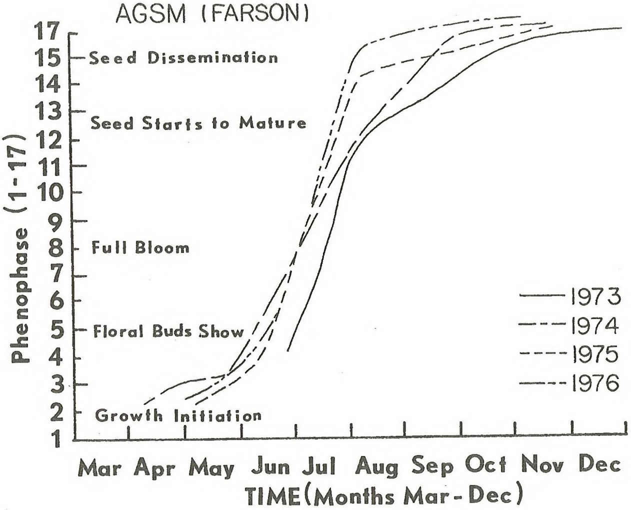

FIGURE 2. Continued

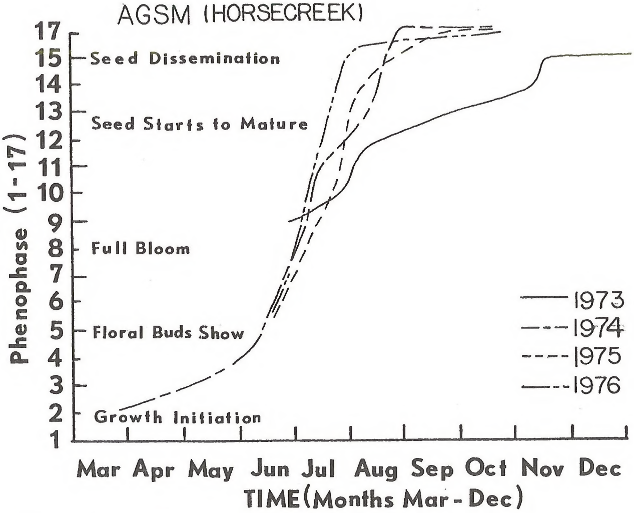

FIGURE 2. Continued

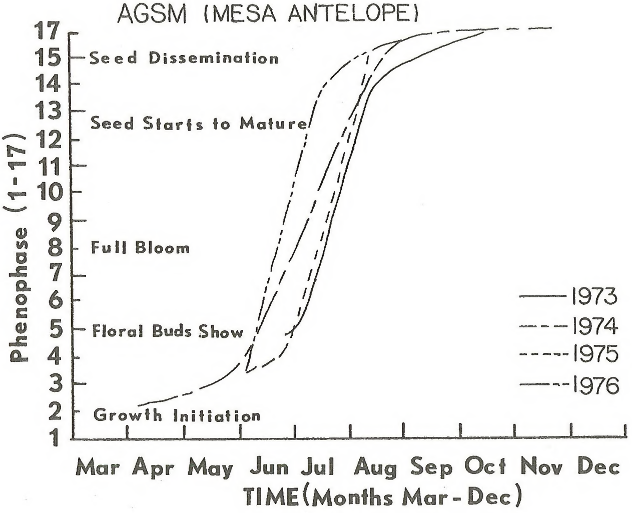

FIGURE 2. Continued

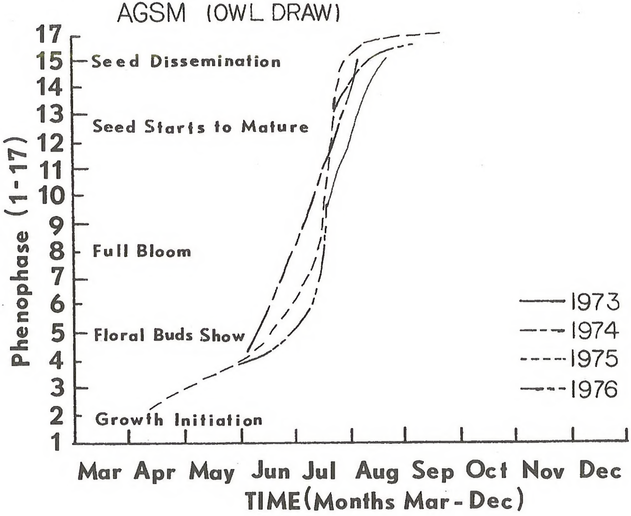

FIGURE 2. Continued

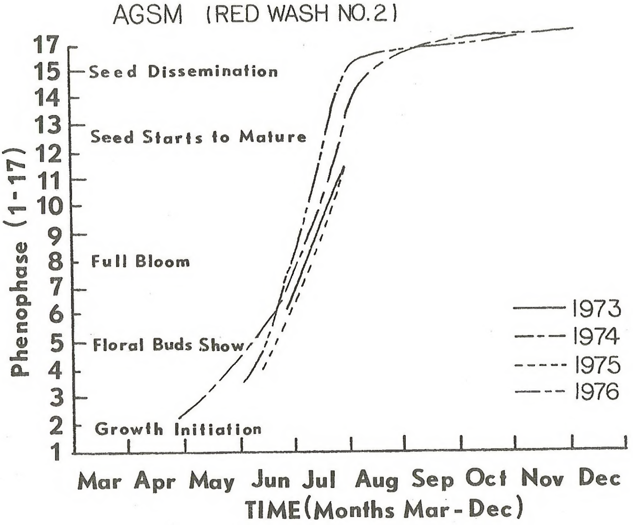

FIGURE 2. Continued

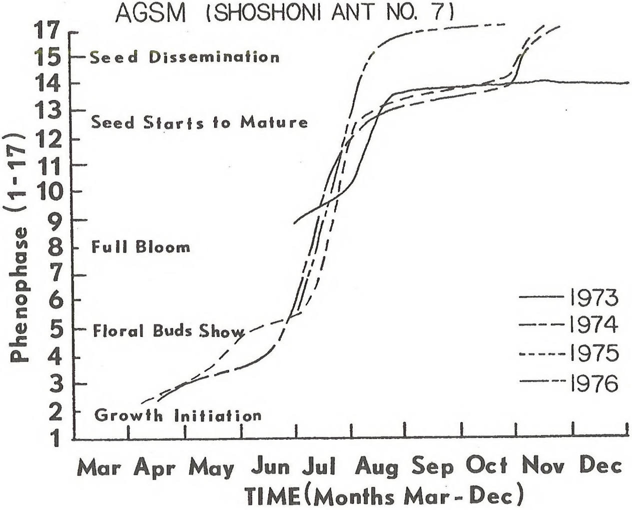

FIGURE 2. Continued

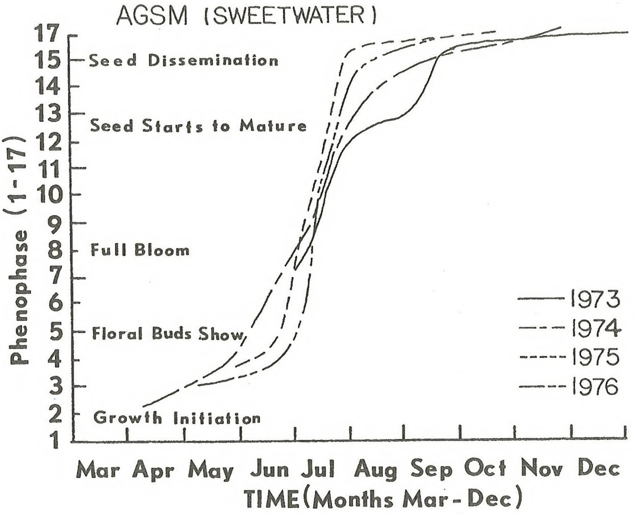

FIGURE 2. Continued

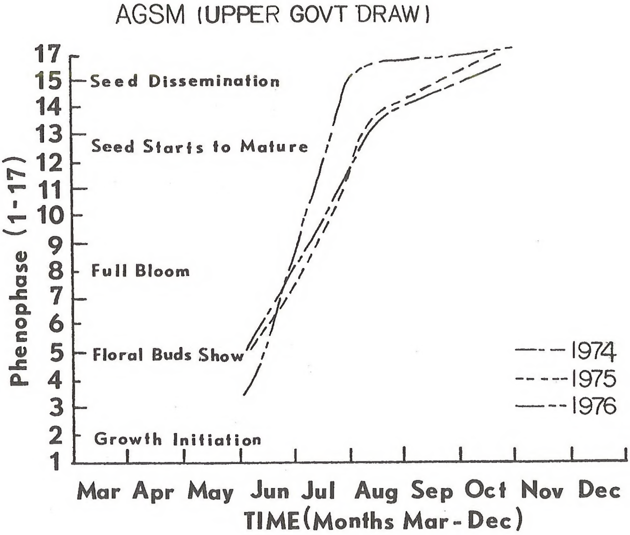

FIGURE 2. Continued

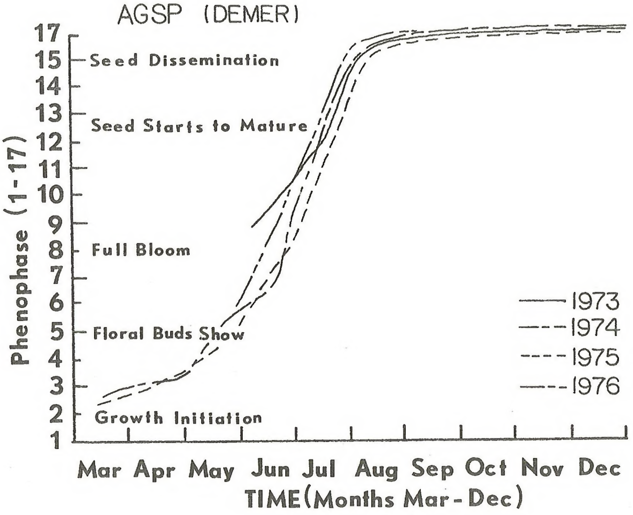

FIGURE 2. Continued

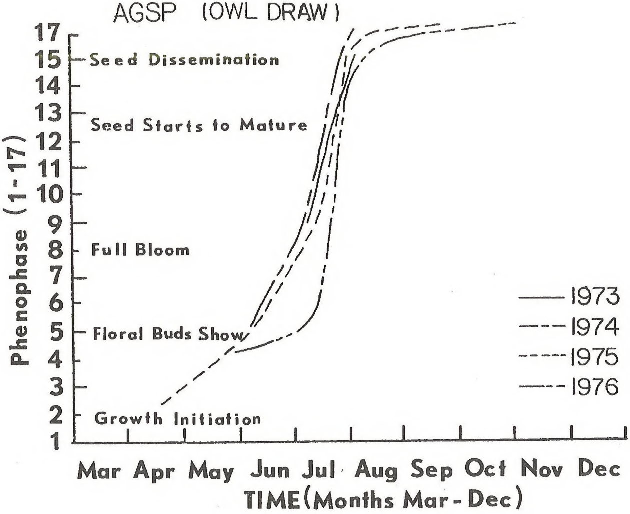

FIGURE 2. Continued

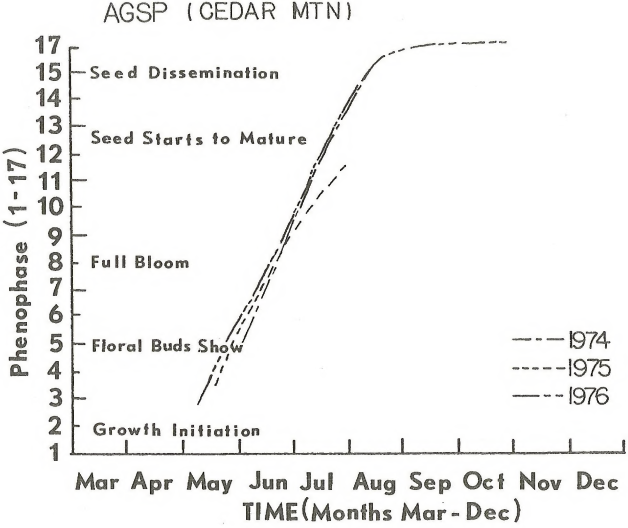

FIGURE 2. Continued

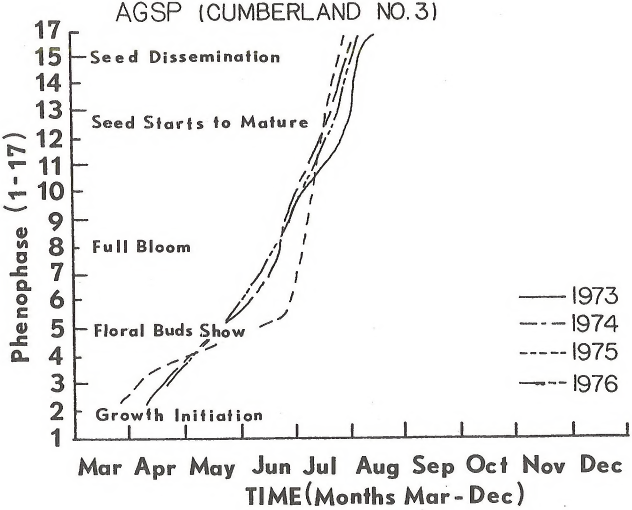

FIGURE 2. Continued

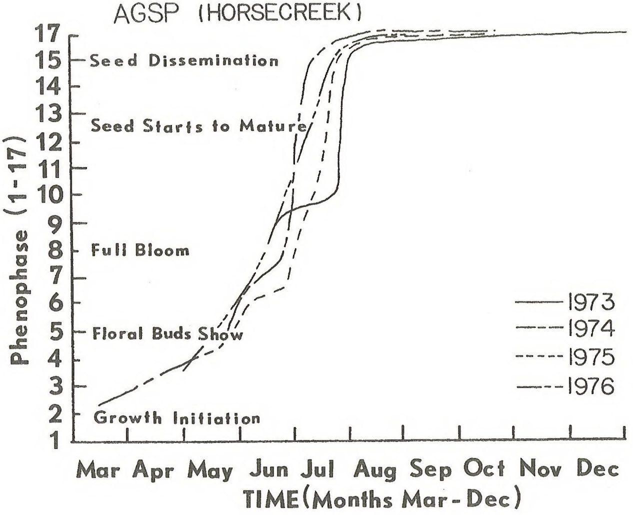

FIGURE 2. Continued

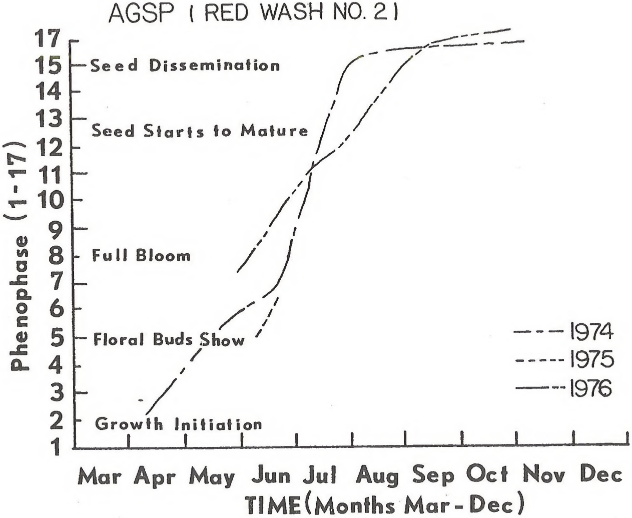

FIGURE 2. Continued

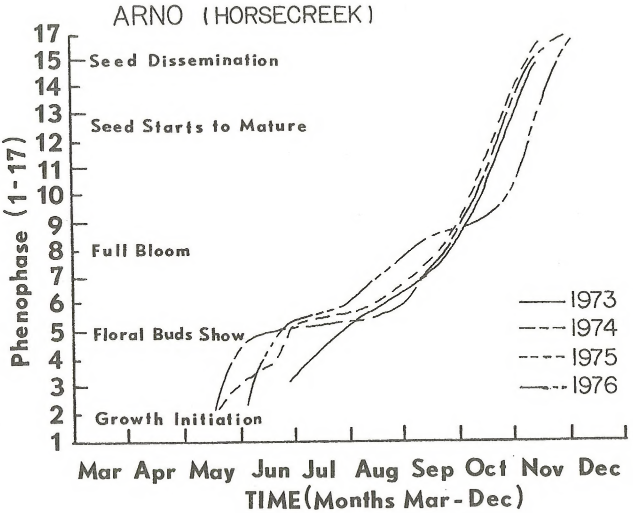

FIGURE 2. Continued

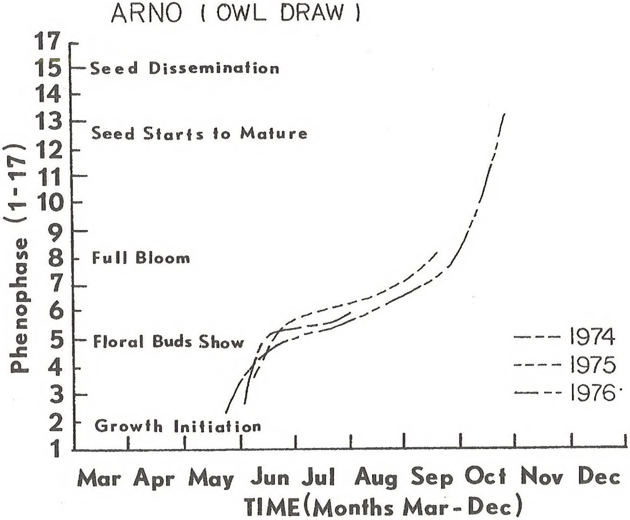

FIGURE 2. Continued

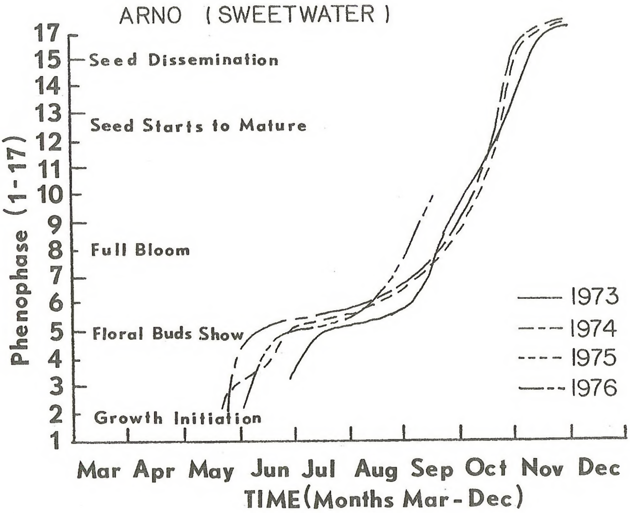

FIGURE 2. Continued

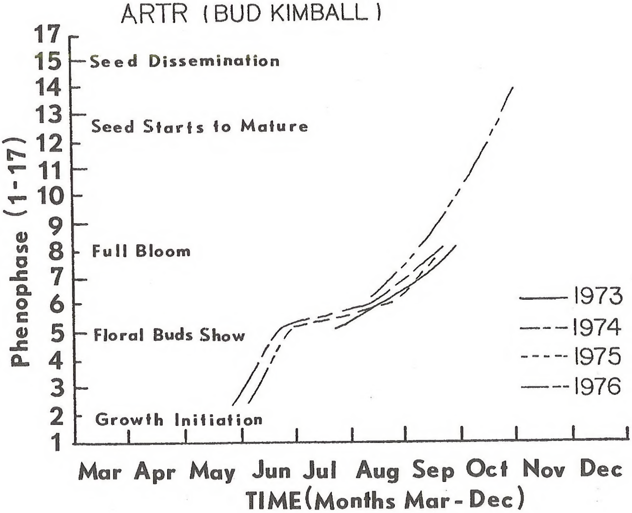

FIGURE 2. Continued

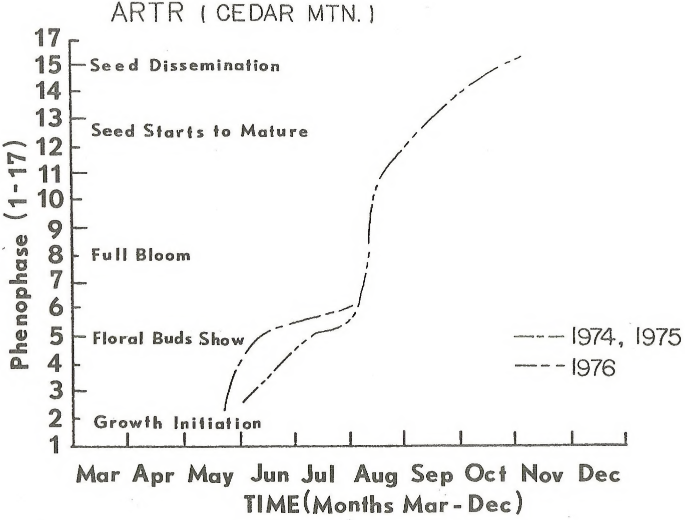

FIGURE 2. Continued

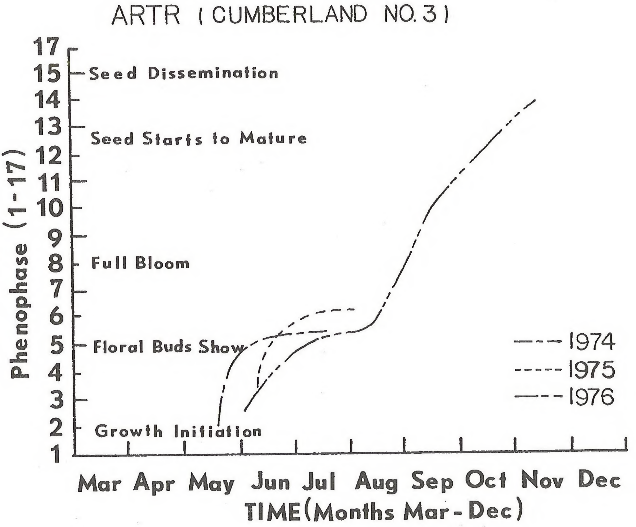

FIGURE 2. Continued

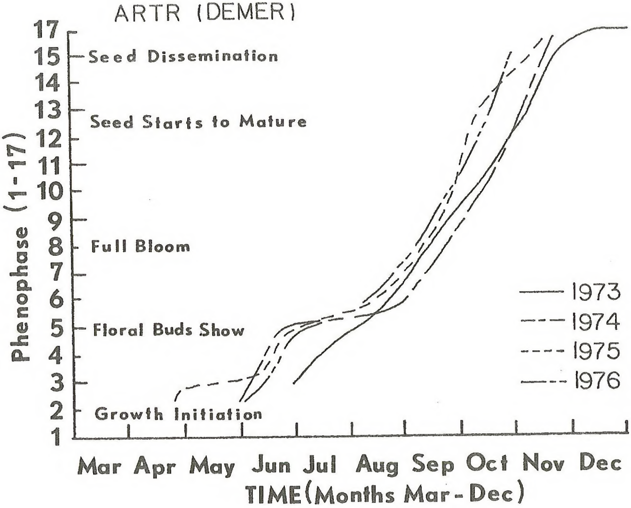

FIGURE 2. Continued

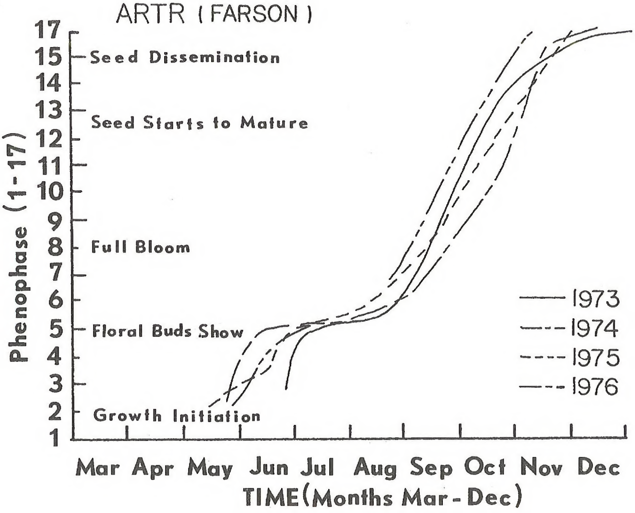

FIGURE 2. Continued

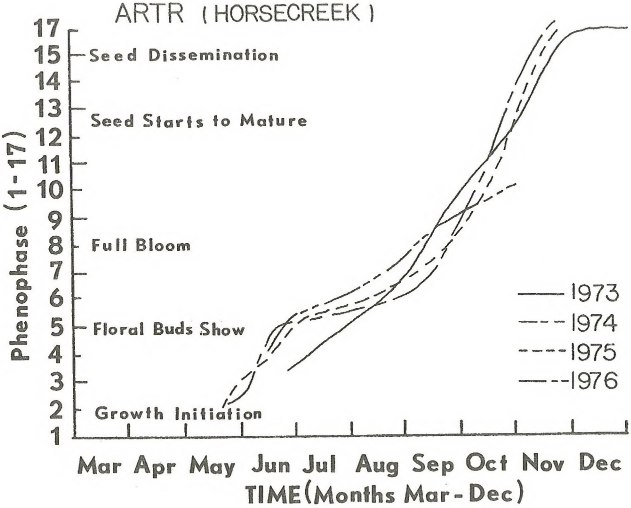

FIGURE 2. Continued

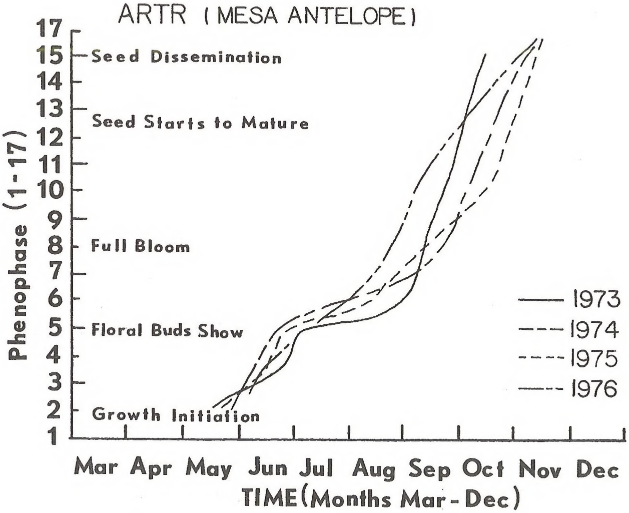

FIGURE 2. Continued

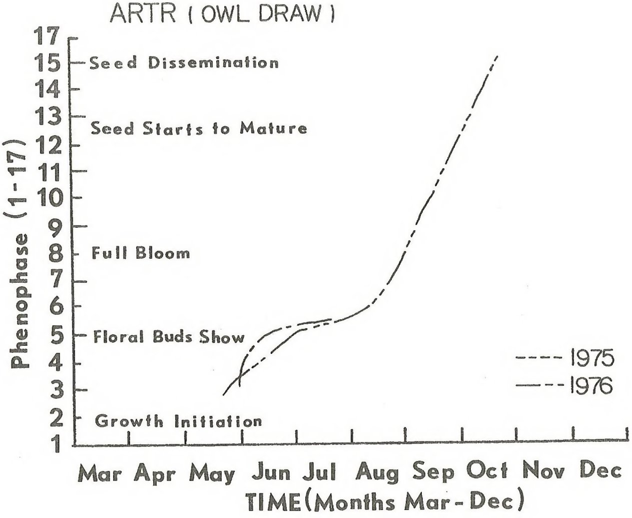

FIGURE 2. Continued

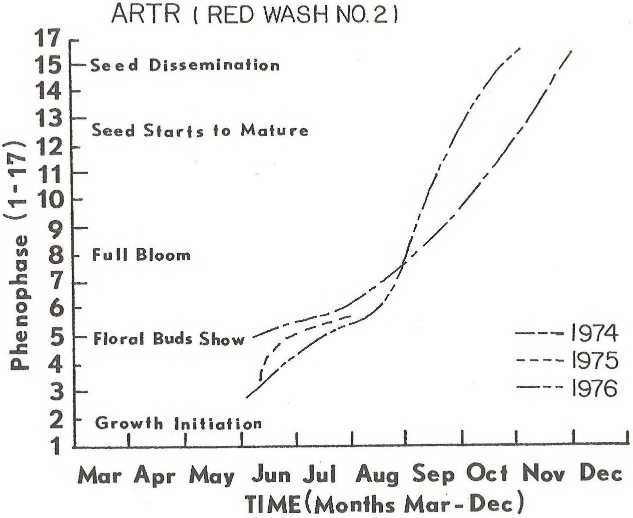

FIGURE 2. Continued

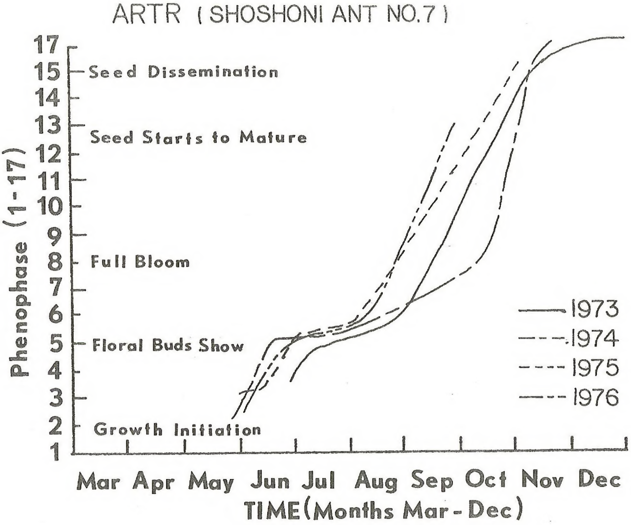

FIGURE 2. Continued

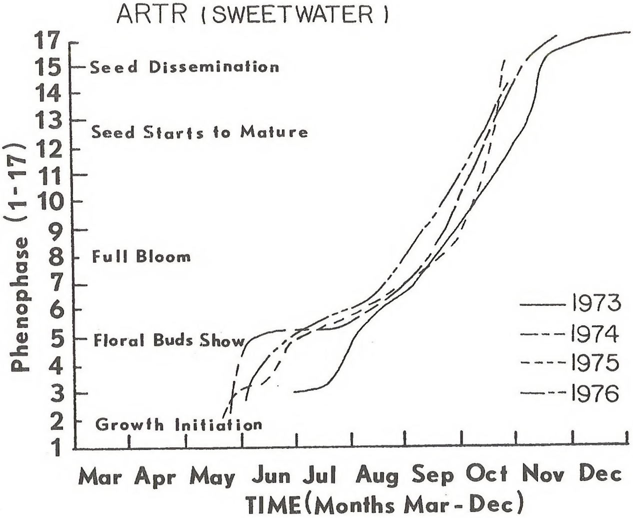

FIGURE 2. Continued

TABLE III. Step-wise selection of independent variables used in the analysis of reproductive phenology for *Agropyron smithii*.

Step No.	Variable entered	Multiple correlation coefficient (R)	Coefficient of determination(R^2)
1	15	.5940	.3528
2	16	.6319	.3993
3	14	.6875	.4727
4	4	.7309	.5342
5	2	.7789	.6067
6	7	.8122	.6596
7	5	.8459	.7156
8	8	.8566	.7337

TABLE IV. Independent variables significant in the analysis of reproductive phenology for _Agropyron smithii_.

Variable	Description
2	Soil moisture % 0-15 cm depth
4	Soil moisture % 46-61 cm depth
5	Soil moisture % 0-15 cm depth previous sampling date
7	Soil moisture % 46-61 cm depth previous sampling date
8	Yearly precip. accumulation (mm)(Oct. 15, 1975 - Oct. 15, 1976)
14	Species forage production (AGSM - kg/ha./yr.)
15	Air temperature (°C)
16	Max. air temp. since previous sampling date (°C)

Production was moderately correlated with maximum air temperature since the previous sampling date (X_{16};r = -.5027). Given favorable moisture and temperature regimes, prolonged plant growth would have been expected to cause higher production.

The multiple regression was highly significant (Table V). All selected partial regression coefficients were significant at 90% confidence or above (Table VI). The eight independent variables used in the regression were highly correlated to reproductive phenophase value (R = .8566) and accounted for 73.37% of the variation in it (R^2 = .7337).

Vegetative Phenology. Thirteen independent variables were found to be significant in the multiple regression analysis of vegetative phenology for Agropyron smithii (Tables VII and VIII). The estimated multiple linear regression equation was:

$$\begin{aligned} Y_{19} = {} & -28{,}054.81 - .42X_1 + 1.98X_2 - .85X_3 - .93X_4 - .77X_6 \\ & + .67X_8 - .92X_9 - .64X_{10} + .21X_{11} + .24X_{13} - .34X_{15} \\ & + 1.93X_{16} - .34X_{17} \end{aligned}$$

Where Y_{19} = vegetative phenophase.

Four promoted phenological advancement: percent soil moisture at 0-15 cm depth (X_2), yearly precipitation accumulation (X_8), July 1 - September 1 precipitation accumulation (X_{11}), and maximum air temperature since the previous sampling date (X_{16}). Eight slowed or prolonged phenological advancement: soil temperature at 38 cm depth (X_1), percent soil moisture at 15-30 cm depth (X_3), percent soil moisture at 46-61 cm depth (X_4), percent soil moisture at 15-30 cm on the previous sampling date (X_6), October 15 - April 15 precipitation accumulation (X_9), April 15 - July 1 precipitation accumulation (X_{10}), air temperature (X_{15}), and minimum air temperature since the previous sampling date (X_{17}).

TABLE V. Analysis of variance for the multiple regression of reproductive phenology of Agropyron smithii.

Source of variation	Degrees of Freedom	Mean Square	F value*
Due to regression	8	339.13	32.04
Deviation about regression	93	10.59	
Total	101		

*Significant at .999 level.

TABLE VI. Significance of regression coefficients used in the analysis of reproductive phenology of _Agropyron smithii_.

Independent variable	Standard Error	t Ratio
2	.083	6.02[3]
4	.085	-.692[3]
5	.077	-.490[3]
7	.126	.580[3]
8	.004	2.52[1]
14	.004	-.489[3]
15	.044	-3.78[2]
16	.061	-5.92[3]

[1] Significant at .90 level.

[2] Significant at .95 level.

[3] Significant at .975 level.

TABLE VII. Step-wise selection of independent variables used in the analysis of vegetative phenology for *Agropyron smithii*.

Step no.	Variable entered	Multiple correlation coefficient (R)	Coefficient of determination(R^2)
1	1	.5291	.2800
2	5	.6116	.3741
3	15	.6709	.4501
4	17	.7322	.5360
5	12	.7585	.5753
6	2	.7626	.5815
7	4	.7809	.6098
8	10	.7882	.6213
9	6	.7982	.6371
10	16	.8033	.6453
11	9	.8139	.6625
12	3	.8173	.6680
13	13	.8221	.6758
14	7	.8259	.6822
15	8	.8285	.6865
16	5 (removed)	.8264	.6829
17	12 (removed)	.8247	.6802
18	11	.9856	.9714
19	7 (removed)	.9856	.9714

TABLE VIII. Independent variables significant in the analysis of vegetative phenology of *Agropyron smithii*

Variable	Description
1	Soil temp. 38 cm depth (°C)
2	Soil moisture % 0-15 cm depth
3	Soil moisture % 15-30 cm depth
4	Soil moisture % 46-61 cm depth
5	Soil moisture % 0-15 cm depth previous sampling date
6	Soil moisture % 15-30 cm depth previous sampling date
7	Soil moisture % 46-61 cm depth previous sampling date
8	Yearly precip. accumulation (mm)(Oct. 15 - April 15)
9	Oct. 15 - April 15 precip accumulation (mm)
10	April 15 - July 1 precip accumulation (mm)
11	July 1 - Sept. 1 precip accumulation (mm)
12	Sept. 1 - Oct. 15 precip accumulation (mm)
13	Total forage pred. (kg./ha./yr.)
15	Air temp (°C)
16	Max, air temp. since previous sampling date (°C)
17	Min. air temp. since previous sampling date (°C)

The relationship between forage production and phenological advancement was probably one of coincidence and not cause and effect.

The multiple regression was highly significant (Table IX). All selected partial regression coefficients were significant at 99% confidence or above (Table X). The thirteen independent variables used in the regression were highly correlated to vegetative phenophase value ($R = .9856$) and accounted for 97.14% of the variation in it ($R^2 = .9714$).

TABLE IX. Analysis of variance for the multiple regression of vegetative phenology of *Agropyron smithii*.

Source of variation	Degrees of Freedom	Mean Square	F value*
Due to regression	13	351.30	229.91
Deviation about regression	88	1.52	
Total	101		

*Significant at .999 level.

TABLE X. Significance of regression coefficients used in the analysis of vegetative phenology of *Agropyron smithii*.

Independent Variable	Standard Error	+ Ratio
1	.016	-27.06[1]
2	.059	33.73[2]
3	.048	-17.57[1]
4	.047	-19.69[1]
6	.038	-20.30[1]
8	2.208	30.47[1]
9	3.030	-30.46[1]
10	2.114	-30.48[1]
11	.069	30.35[1]
13	.795	30.47[1]
15	.021	-16.41[1]
16	.060	31.87[2]
17	.019	-18.37[1]

[1] Significant at .99 level.

[2] Significant at .999 level.

Analyses for Agropyron spicatum

Reproductive Phenology. Of seven environmental independent variables used in the multiple regression for reproductive phenology of Agropyron spicatum, six were found to be significant (Tables XI and XII). Percent soil moisture at 15-30 cm depth on the previous sampling date (X_6) was most highly correlated ($r = -.555$) with reproductive phenophase value (Y_{18}). This variable appeared as an important causal factor in the initial steps of the regression. But in the later steps the combined effects of other independent variables that had been entered rendered this variable no longer significant and it was removed from the regression. Percent soil moisture at 0-15 cm depth (X_2) was not highly correlated to reproductive phenophase value ($r = .057$) but was to percent soil moisture at 15-30 cm depth on the previous sampling date (X_6; $r = .611$) and in combination with that variable was an important causal factor.

The estimated multiple linear regression equation was:

$$Y_{18} = 1.62 + 1.23X_2 - .22X_3 + .44X_4 = 1.54X_5 + .50X_7 - .003X_{10}$$

where Y_{18} = reproductive phenophase value

The equation indicated that soil moisture had the most effect on phenological development. Phenological development was stimulated by percent soil moisture at 0-15 cm depth (X_2), percent soil moisture at 46-61 cm depth (X_4) and at the same depth on the previous sampling date (X_7), and April 15 - July 1 precipitation accumulation (X_{10}). Phenological progression was slowed by percent soil moisture at 0-15 cm depth on the previous sampling date (X_5) and percent soil moisture at

TABLE XI. Step-wise selection of independent variables used in the analysis of reproductive phenology for *Agropyron spicatum*

Step No.	Variable entered	Multiple correlation coefficient (R)	Coefficient of determination(R^2)
1	6	.5584	.3078
2	2	.7467	.5576
3	5	.8330	.6938
4	6 (removed)	.8329	.6938
5	7	.8445	.7132
6	10	.8509	.7240
7	4	.8593	.7384
8	3	.8640	.7465

TABLE XII. Independent variables significant in the analysis of reproductive phenology of *Agropyron spicatum*.

Variable	Description
2	Soil moisture % 0-15 cm depth
3	Soil moisture % 15-30 cm depth
4	Soil moisture % 46-61 cm dpeth
5	Soil moisture % 0-15 cm depth previous sampling date
6	Soil moisture % 15-30 cm depth previous sampling date
7	Soil moisture % 46-61 cm depth previous sampling date
10	April 15 - July 1 precip. accumulation (mm)

at 15-30 cm depth (X_3).

The multiple regression was highly significant (Table XIII). Significances of selected partial regression coefficients are given in Table XIV. The six independent variables were highly correlated to reproductive phenophase value (R = .8640) and accounted for 74.65% of the variation in it ($R^2 = .7465$).

Vegetative Phenology. Six environmental independent variables were used in the regression for vegetative phenology of Agropyron spicatum. Of these, five were significant (Tables XV and XVI). Percent soil moisture at 46-61 cm depth on the previous sampling date (X_7) was most highly correlated with vegetative phenophase value (Y_{19}; r = -.544). This variable was later removed after other independent variables had been entered.

The estimated multiple linear regression equation was:

$$Y_{19} = 18.56 - .83X_2 - .64X_5 - .52X_6 - .19X_{16} + .10X_{17}$$

where Y_{19} = vegetative phenophase value

Soil moisture and air temperature had the most effect on phenological development. Percent soil moisture at 0-15 cm depth (X_2) and minimum air temperature since the previous sampling date (X_{17}) speeded phenological development. Percent soil moisture at 0-15 cm depth on the previous sampling date (X_5), percent soil moisture at 15-30 cm depth on the previous sampling date (X_6), and maximum air temperature since the previous sampling date (X_{16}) slowed phenological progression.

The multiple regression was highly significant (Table XVII). Selected partial regression coefficients were significant at confidence levels of 85% or above (Table XVIII). The five independent variables were highly correlated to vegetative phenophase value (R = .8921) and accounted for 79.58% of the variation in it (R^2 = .7958).

TABLE XIII. Analysis of variance for the multiple regression of reproductive phenology of _Agropyron spicatum_

Source of variation	Degrees of freedom	Mean Square	F value*
Due to regression	6	221.75	15.71
Deviation about regression	32	14.12	
Total	32		

*Significant at .999 level

TABLE XIV. Significance of regression coefficients used in the analysis of reproductive phenology of *Agropyron spicatum*

Independent variable	Standard error	t Ratio
2	.214	5.82[4]
3	.218	-1.01[1]
4	.286	1.55[2]
5	.209	-7.35[5]
7	.264	1.90[3]
10	.015	1.88[3]

[1] Significant at .75 level

[2] Significant at .85 level

[3] Significant at .90 level

[4] Significant at .975 level

[5] Significant at .99 level

TABLE XV. Step-wise selection of independent variables used in the analysis of vegetative phenology for Agropyron spicatum

Step no.	Variable entered	Multiple correlation coefficient (R)	Coefficient of determination(R^2)
1	7	.5444	.2964
2	16	.7116	.5064
3	5	.8359	.6987
4	2	.8774	.7699
5	7 (removed)	.8771	.7693
6	17	.8814	.7769
7	6	.8921	.7958

TABLE XVI. Description of independent variables used in the analysis of vegetative phenology of Agropyron spicatum

Variable	Description
2	Soil moisture % at 0-15 cm depth
5	Soil moisture % at 0-15 cm depth previous sampling date
6	Soil moisture % at 15-30 cm depth previous sampling date
7	Soil moisture % at 46-61 cm depth previous sampling date
16	Max. air temp. since previous sampling date (^{o}C)
17	Min. air temp. since previous sampling date (^{o}C)

TABLE XVII. Analysis of variance of the multiple regression of vegetative phenology of _Agropyron_ _spicatum_.

Source of variation	Degrees of Freedom	Mean Square	F Value*
Due to regression	5	267.04	25.73
Deviation about regression	33	10.38	
Total	38		

*Significant at .999 level

TABLE XVIII. Significance of regression coefficients used in the analysis of vegetative phenology of Agropyron spicatum.

Independent variable	Standard Error	t Ratio
2	.188	4.42[3]
5	.263	-2.44[2]
6	.297	-1.75[1]
16	.091	-2.07[2]
17	.055	1.77[1]

[1] Significant at .85 level

[2] Significant at .90 level

[3] Significant at .975 level

Analyses for *Artemisia nova*

Reproductive Phenology. Nine of the environmental independent variables were found to significantly affect the reproductive phenological progression of *Artemisia nova* (Tables XIX and XX). The estimated multiple linear regression equation was:

$$Y_{18} = -83.87 + .20X_2 + .29X_3 + .50X_5 - .23X_6 + .19X_7$$
$$+ .38X_{10} - .43X_{15} - .30X_{16} + .39X_{17}$$

where Y_{18} = reproductive phenophase value

Factors that promoted faster progression were percent soil moisture at 0-15 cm. depth (X_2), percent soil moisture at 15-30 cm. depth (X_3), percent soil moisture at 46-61 cm. depth on the previous sampling date (X_7), April 15 - July 1 precipitation accumulation (X_{10}), and minimum air temperature since the previous sampling date (X_{17}). Factors that slowed progression were percent soil moisture at 0-15 cm. depth on the previous sampling date (X_5), percent soil moisture at 15-30 cm. depth on the previous sampling date (X_6), air temperatue (X_{15}), and maximum air temperature since the previous sampling date (X_{16}).

The soil moisture results suggested that moisture in the upper profiles early in the growing season slowed reproductive advancement. As moisture evaporated or percolated deeper into the profile, reproduction was stimulated and progressed more rapidly.

The multiple regression was highly significant (Table XXI). Significances of selected partial regression coefficients are given in Table XXII. The nine independent variables were highly correlated to repro-

TABLE XIX. Step-wise selection of independent variables used in the analysis of reproductive phenology for Artemisia nova.

Step no.	Variable entered	Multiple correlation coefficient (R)	Coefficient of determination (R^2)
1	1	.6087	.3706
2	6	.7494	.5616
3	17	.7981	.6369
4	2	.8267	.6835
5	15	.8441	.7125
6	10	.8814	.7769
7	16	.9116	.8310
8	1 (removed)	.9095	.8272
9	5	.9165	.8400
10	3	.9278	.8608
11	7	.9301	.8651

TABLE XX. Description of independent variables used in the analysis of reproductive phenology of *Artemisia nova*.

Variable	Description
1	Soil temp. 38 cm. depth (°C)
2	Soil moisture % 0-15 cm. depth
3	Soil moisture % 15-30 cm. depth
5	Soil moisture % 0-15 cm. depth previous sampling date
6	Soil moisture % 15-30 cm. depth previous sampling date
7	Soil moisture % 46-61 cm. depth previous sampling date
10	April 15-July 1 precip. accumulation (mm)
15	Air temp. (°C)
16	Max. air temp. since previous sampling date
17	Min. air temp. since previous sampling date

TABLE XXI. Analysis of variance for the multiple regression of reproductive phenology of Artemisia nova.

Source of variation	Degrees of Freedom	Mean Square	F value*
Due to regression	9	138.06	22.80
Deviation about regression	32	6.06	
Total	41		

*Significant at .999 level

TABLE XXII. Significance of regression coefficients used in the analysis of reproductive phenology of *Artemisia nova*.

Independent variable	Standard error	t ratio
2	.081	2.48[2]
3	.127	2.31[2]
5	.173	-2.92[3]
6	.112	-1.97[2]
7	.190	1.01[1]
10	.103	3.66[3]
15	.052	-8.21[5]
16	.137	-2.23[2]
17	.074	5.32[4]

[1] Significant at .75 level

[2] Significant at .90 level

[3] Significant at .95 level

[4] Significant at .975 level

[5] Significant at .99 level

ductive phenophase value (R = .9301) and accounted for 86.51% of the variability in it (R^2 = .8651).

Vegetative Phenology. Nine independent environmental factors affected the rate of vegetative phenological progression for Artemisia nova (Tables XXIII and XXIV). The estimated multiple linear regression equation was:

$$Y_{19} = 69.80 - .32X_1 + .11X_2 + .28X_3 - .45X_4 - .35X_5 + .20X_7$$
$$-.04X_8 - .71X_{16} + .42X_{17}$$

where Y_{19} = vegetative phenophase value

Factors that promoted faster progression were percent soil moisture at 0-15 cm. depth (X_2), percent soil moisture at 15-30 cm. depth (X_3), percent soil moisture at 46-61 cm. depth on the previous sampling date (X_7), and minimum air temperature since the previous sampling date (X_{17}). Factors that slowed progression were soil temperature at 38 cm. depth (X_1), percent soil moisture at 46-61 cm. depth (X_4), percent soil moisture at 0-15 cm. depth since the previous sampling date (X_5), yearly precipitation accumulation (X_8), and maximum air temperature since the previous sampling date (X_{16}). Soil moisture had approximately the same effect on vegetative phenology as it did on reproductive phenology.

The multiple regression was highly significant (Table XXV). Significances of selected partial regression coefficients are given in Table XXVI. The nine independent variables were highly correlated to vegetative phenophase value (R = .9316) and accounted for 86.79% of the variation in it (R^2 = .8679).

TABLE XXIII. Step-wise selection of independent variables used in the analysis of vegetative phenology for Artemisia nova.

Step no.	Variable entered	Multiple correlation Coefficient (R)	Coefficient of determination (R^2)
1	1	.6504	.4230
2	5	.7166	.5136
3	2	.7971	.6353
4	7	.8194	.6715
5	16	.8497	.7220
6	17	.8813	.7767
7	8	.9099	.8278
8	4	.9197	.8458
9	7 (removed)	.9179	.8426
10	3	.9293	.8636
11	7	.9316	.8679

TABLE XXIV. Description of independent variables used in the analysis of vegetative phenology of *Artemisia nova*.

Variable	Description
1	Soil temp. 38 cm. depth (^{o}C)
2	Soil moisture % 0-15 cm. depth
3	Soil moisture % 15-30 cm. depth
4	Soil moisture % 46-61 cm. depth
5	Soil moisture % 0-15 cm. depth previous sampling date
7	Soil moisture % 46-61 cm. depth previous sampling date
8	Yearly precip. accumulation (mm) Oct. 15, 1975-Oct. 15, 1976
16	Max. air temp. since previous sampling date (^{o}C)
17	Min. air temp. since previous sampling date (^{o}C)

TABLE XXV. Analysis of variance for the multiple regression of vegetative phenology of *Artemisia nova*.

Source of variation	Degrees of freedom	Mean square	F value*
Due to regression	9	134.32	23.36
Deviation about regression	32	5.75	
Total	41		

*Significant at .999 level

TABLE XXVI. Significance of regression coefficients used in the analysis of vegetative phenology of *Artemisia nova*.

Independent variable	Standard error	t ratio
1	.056	-5.72[5]
2	.077	1.37[2]
3	.123	2.31[3]
4	.179	-2.52[3]
5	.170	-2.08[3]
7	.200	1.01[1]
8	.011	-3.96[4]
16	.143	-4.94[5]
17	.080	5.24[5]

[1] Significant at .75 level

[2] Significant at .80 level

[3] Significant at .90 level

[4] Significant at .95 level

[5] Significant at .975 level

Analyses for Artemisia tridentata

Reproductive Phenology. Eight independent variables were significant in the regression analysis of reproductive phenology for Artemisia tridenta (Tables XXVII and XXVIII). The estimated multiple linear regression equation was:

$$Y_{18} = 10.77 - .27X_1 + .34X_2 - .94X_4 - .62X_5 + .55X_7 + .02X_{12} + .01X_{13} - .19X_{15}$$

where Y_{18} = reproductive phenophase value

Factors that promoted phenological advancement were percent soil moisture at 0-15 cm. depth (X_2), percent soil moisture at 46-61 cm. depth on the previous sampling date (X_7), and September 1--October 15 precipitation accumulation (X_{12}). Factors that slowed and prolonged phenological advancement were soil temperature at 38 cm. depth (X_1), percent soil moisture at 46-61 cm. depth (X_4), percent soil moisture at 0-15 cm depth on the previous sampling date (X_5), and air temperature (X_{15}). Total forage production (X_{13}) was not believed to affect phenology but rather to coincide with it.

The soil results suggested that abundant moisture in the surface soil slowed the development of flower parts but as moisture percolated deeper into the soil profile reproductive development was promoted.

The multiple regression was highly significant (Table XXIX). Significances of selected partial regression coefficients are given in Table XXX. The eight independent variables were moderately correlated to reproductive phenophase value (R = .8507) and accounted for 72.36% of the variability in it (R^2 = .7236).

TABLE XXVII. Step-wise selection of independent variables used in the analysis of reproductive phenology for *Artemisia tridentata*.

Step no.	Variable entered	Multiple correlation coefficient (R)	Coefficient of determination (R^2)
1	15	.6055	.3666
2	5	.7231	.5228
3	12	.7505	.5633
4	1	.7755	.6014
5	4	.8041	.6466
6	7	.8298	.6885
7	2	.8469	.7173
8	13	.8507	.7236

TABLE XXVIII. Description of independent variables used in the analysis of reproductive phenology of *Artemisia tridentata*.

Variable	Description
1	Soil temp. 38 cm. depth (^{o}C)
2	Soil moisture % 0-15 cm. depth
4	Soil moisture % 46-61 cm. depth
5	Soil moisture % 0-15 cm. depth previous sampling date
7	Soil moisture % 46-61 cm. depth previous sampling date
12	Sept. 1--Oct. 15 precip. accumulation (mm)
13	Total forage production (kg./Ha/hr)
15	Air temp. (^{o}C)

TABLE XXIX. Analysis of variance for the multiple regression of reproductive phenology of *Artemisia tridentata*.

Source of variation	Degrees of freedom	Mean square	F value*
Due to regression	8	340.43	30.44
Deviation about regression	93	11.18	
Total	101		

*Significant at .999 level

TABLE XXX. Significance of regression coefficients used in the analysis of reproductive phenology of Artemisia tridentata.

Independent variable	Standard error	t ratio
1	.064	-4.30[3]
2	.108	3.18[2]
4	.170	-5.51[3]
5	.090	-6.81[3]
7	.165	3.31[2]
12	.006	3.69[2]
13	.007	1.46[1]
15	.060	-3.21[2]

[1] Significant at .85 level

[2] Significant at .95 level

[3] Significant at .975 level

Vegetative Phenology. Eleven independent variables were used in the multiple regression analysis of vegetative phenology of Artemisia tridentata (Tables XXXI and XXXII). The estimated multiple linear regression equation was:

$$Y_{19} = 22.43 - .40X_1 + .12X_2 - .60X_4 - .61X_5 + .71X_7 - .01X_8$$
$$+ .03X_{10} + .02X_{12} + .01X_{14} - .44X_{16} + .09X_{17}$$

where Y_{19} = vegetative phenophase value

Five factors promoted vegetative development: percent moisture at 0-15 cm depth (X_2), percent soil moisture at 46-61 cm. depth on the previous sampling date (X_7), April 15--July 1 precipitation accumulation (X_{10}), September 1--October 15 precipitation accumulation (X_{12}), and minimum air temperature since the previous sampling date (X_{17}). Five factors slowed or prolonged vegetative development: soil temperature at 38 cm. depth (X_1), percent soil moisture at 46-61 cm. depth (X_4), percent soil moisture at 0-15 cm. depth on the previous sampling date (X_5), total yearly precipitation accumulation (X_8), and maximum air temperature since the last sampling date (X_{16}). Artemisia tridentata forage production (X_{14}) probably did not affect vegetative development, however, prolonged growth would have permitted higher forage yield.

As in reproductive development, abundant moisture in the surface soil slowed development. The vegetative plants developed more rapidly as water percolated deeper into the soil.

The multiple regression was highly significant (Table XXXIII). Significances of the selected partial regression coefficients are given in Table XXXIV. The eleven independent variables were highly correlated to vegetative phenophase value (R = .8675) and accounted for 75.25% of the variability in it (R^2 = .7525).

TABLE XXXI. Step-wise selection of independent variables used in the analysis of vegetative phenology for *Artemisia tridentata*.

Step no.	Variable entered	Multiple correlation coefficient (R)	Coefficient of determination (R^2)
1	1	.6498	.4222
2	5	.7116	.5064
3	16	.7557	.5711
4	4	.7827	.6125
5	12	.8123	.6598
6	7	.8319	.6920
7	10	.8516	.7252
8	2	.8590	.7379
9	14	.8614	.7420
10	17	.8647	.7477
11	8	.8675	.7525

TABLE XXXII. Description of independent variables used in the analysis of vegetative phenology of *Artemisia tridentata*.

Variable	Description
1	Soil temp. 38 cm. depth (°C)
2	Soil moisture % 0-15 cm. depth
4	Soil moisture % 46-61 cm. depth
5	Soil moisture % 0-15 cm. depth previous sampling date
7	Soil moisture % 46-61 Cm. depth previous sampling date
8	Yearly precip. accumulation (mm) Oct. 15, 1975--Oct. 15, 1976
10	April 15--July 1 precip. accumulation (mm)
12	Sept. 1--Oct. 15 precip. accumulation (mm)
14	Forage production (ARTR-kg./ha./yr.)
16	Max. air temp. since previous sampling date (°C)
17	Min. air temp. since previous sampling date (°C)

TABLE XXXIII. Analysis of variance for the multiple regression of vegetative phenology of *Artemisia tridentata*.

Source of variation	Degrees of freedom	Mean square	F value*
Due to regression	11	251.73	24.87
Deviation about regression	90	10.12	
Total	101		

*Significant at .999 level

TABLE XXXIV. Significances of regression coefficients used in the analysis of vegetative phenology of *Artemisia tridentata*.

Independent variable	Standard error	t ratio
1	.048	-8.24[6]
2	.119	1.01[1]
4	.161	-3.76[4]
5	.095	-6.44[5]
7	.159	4.45[5]
8	.006	-1.32[2]
10	.010	2.61[3]
12	.007	2.45[3]
14	.008	1.15[2]
16	.101	-4.35[5]
17	.048	1.95[3]

[1] Significant at .75 level

[2] Significant at .80 level

[3] Significant at .90 level

[4] Significant at .95 level

[5] Significant at .975 level

[6] Significant at .99 level

SECTION III

PRECIPITATION PATTERN STUDY

1976

Introduction

During 1970 over 70 gauges were installed at 6 to 12 mile intervals throughout the Big Horn and Wind River Basins. Since that time approximately 20 gauges in the Big Horn Basin have been discontinued and some 80 gauges have been installed at various exclosures and study sites throughout western Wyoming. These gauges are cans, 12" in height and approximately 2.75" in diameter. Precipitation is read to inches of rainfall by measuring the water in ml. The can diameter allows one hundred ml of water to be equal to 1" of precipitation. The gauges are read on the same four dates each year -- April 15, July 1, September 1 and October 15. Personnel of the Worland, Rawlins, Casper and Rock Springs Districts of the Bureau of Land management cooperate with the University in reading the instruments. Some gauges are also read by personnel of the Soil Conservation Service and the Wyoming Game and Fish Commission.

The U. S. Weather Bureau and the U. S. Geological Survey precipitation data are used to provide additional information from other locations. This cooperative effort provides an effective network for future evaluation of precipitation patterns. A map of precipitation gauge locations was presented in the 1963 report.

Precipitation data for 1976 from the University gauges are presented in Table 1; those from the U. S. Weather Bureau stations are presented in Table II.

Results 1976

Winter and spring moisture values during 1976 were, for the most part, relatively uniform and in some instances were greater than exhibited on long-term average records. In the Big Horn Basin area and the northern portion of the Wind River Basin total annual precipitation at most gauges was considerably greater than long-term average values. It appeared that summer precipitation values, as well as the fall precipitation, were considerably greater than normal. Southward through the Wind River Basin and into Carbon and Sweetwater Counties, precipitation data were considerably less than normal and seemed strongly affected because of low precipitation during summer and fall. To the east in Natrona County precipitation appeared to be greater than average at most locations. This occurred apparently because of good moisture conditions during summer and fall, as well as during the winter and spring periods. Several significant incidences of snowfall were noted in the area southeast of Worland at the Demer Exclosure. More than 8" of snow was present on January 10. At the Shoshoni Ant. Exclosure there was approximately 5" of snow on the ground. Most locations had significant amounts of snow during January but in the second week of March significant variation was noted in that the Sweetwater Exclosure had none and the soil was relatively dry. while at the Demer Exclosure some snow was present but very, very muddy soils were evident and also early spring growth of sandberg bluegrass, western wheatgrass and sagebrush was noted. The snow and late-winter warm temperature interaction obviously had significant effects upon the initiation of plant growth. The summer of 1976, especially in the Big Horn and Wind River Basin areas, could be called the year of yellow sweetclover because of its very, very great abundance along the highways in western Wyoming. Phenology progression along pipeline revegetation plots in the Big Horn Basin on the 15th of July was more than two weeks ahead of that which had occurred during 1975. Obviously, all areas in the Big Horn Basin had not sustained significant snowfall, especially to the west of the Big Horn River, and on those areas herbage production was limited.

TABLE I. Precipitation data for 1976 from University of Wyoming gauges for the periods October 15-April 15 (winter), April 15-July 1 (spring), July 1-September 1 (summer) and September 1-October 15 (fall).

Rain Gauge No.	Rain Gauge Name	Winter Apr 15 '76	Spring July 1 '76	Summer Sept 1 '76	Fall Oct 15 '76	Total '76	Long Term Average	No. of Years
	Big Horn County							
176	Basin Flats Exc.	2.29	2.10	1.26	1.48	7.13	6.35	10
123	Big Flat Exc.	2.82	2.33	1.11	1.13	7.39	6.00	9
194	Emblem Ranch	GI	3.00	.46	1.10	--	--	--
24	Halogeton Exc. #1	1.50	2.66	.68	.76	5.60	5.43	17
167	Halogeton Exc. #2	1.93	2.85	.82	.86	6.46	6.15	5
168	Halogeton Exc. #3	1.02	2.45	.84	.64	4.95	5.29	5
12	Horse Creek	4.42	2.71	1.80	1.68	10.61	11.16	17
113	Horse Haven	2.53	2.06	1.37	1.62	7.58	6.73	10
21	Kane Deer	3.22	5.85	1.76	1.25	12.08	12.30	12
149	Kane Deer GRI	3.15	5.76	1.81	1.36	12.08	13.03	9
116	Kane Seed	1.55	1.80	1.79	1.70	6.84	6.93	9
148	Medicine Lodge GRI	6.53	4.85	3.74	2.46	17.58	14.17	9
175	Potato Ridge	2.98	2.72	1.08	1.51	8.29	7.94	9
23	Sheep Springs	5.10	4.69	3.34	2.48	15.61	13.81	16
174	Sheldon Gulch	2.87	2.57	.98	1.44	7.86	7.50	9
	Park County							
147	Big Sage Exc.	2.20	3.47	.34	1.96	7.97	7.96	8
146	Big Sky	1.82	3.76	.41	1.08	7.07	8.66	8
100	Buffalo Basin	2.43	4.73	1.14	2.84	11.14	10.51	10
193	Canyon	3.20	3.00	.85	1.21	8.26	9.33	4
145	Hill Top Spring	4.20	5.70	ND	1.43	--	15.12	7
184	Little Dry Creek	1.75	3.12	1.38	E1.43	E7.68	8.48	2
192	Skyline	2.87	NR	2.80	1.60	7.27	7.16	3
191	State Line	2.60	ND	.21	1.13	--	6.73	3
	Washakie County							
1	Ant Hill Worland Exc.	1.90	2.58	1.07	1.48	7.03	6.43	17
150	Big Trails GRI	NR	8.81	1.07	2.45	12.33	13.16	9
41	Bud Kimball	2.94	3.85	1.20	2.52	10.51	9.41	15
7	Buffalo Creek	E4.00	E5.00	2.57	2.70	E14.27	10.68	14
17	Burnt Wagon	2.00	2.72	.78	1.12	6.62	6.12	15
179	Chalk	1.74	3.65	.97	1.01	7.37	6.32	16
8	Demer	2.26	3.94	1.21	2.22	9.63	8.20	17
4	Dutch Nick Flat	3.03	4.47	1.30	1.25	10.05	7.05	16
15	15-Mile Study Area(179)	1.74	3.65	.97	1.01	7.37	6.32	16
177	Hawk	2.08	2.62	.85	1.11	6.66	6.10	15
166	Mills Burn	NR	7.66	1.22	2.39	11.27	12.50	6
185	Rice Burn	6.72	4.21	3.30	2.80	17.03	14.02	3
180	Sand Creek	2.23	2.11	1.00	2.29	7.63	6.65	10
36	Smilo	3.16	3.98	1.43	2.23	10.80	8.57	16
181	Tolman Ridge	2.68	3.15	1.04	2.43	9.30	6.93	10
39	Two-Mile Hill	3.90	3.47	1.12	2.58	11.07	9.55	16
13	West Pasture	1.62	2.76	.60	1.02	6.00	5.60	15
178	Willwood	1.65	3.26	.95	.97	6.83	6.17	16
115	Worland Cattle Co.	2.09	3.94	.87	2.02	8.92	7.87	9
	Hot Springs County							
117	Big Bend Exc.	3.92	4.80	3.15	2.75	14.62	10.26	9
76	Cochran Exc.	3.15	4.72	1.41	1.75	11.03	10.20	16
77	Kirby Creek	3.17	3.80	1.52	1.75	10.24	9.27	14
11	Lower Enos Creek Exc.	3.41	4.30	2.03	2.05	11.79	10.78	9
133	North Butte(Thermop.) Relic	3.09	E5.35	2.36	2.27	13.07	11.13	5
182	Round Top Mtn. Relic	E3.50	E5.35	2.36	2.68	E13.89	12.04	5
75	Sand Gulch Exc.	2.68	3.29	1.10	1.88	8.95	8.89	15
22	Upper Enos Creek	4.50	6.05	ND	ND	--	15.49	8

TABLE I. (continued)

Rain Gauge No.	Rain Gauge Name	Winter Apr 15 '76	Spring July 1 '76	Summer Sept 1 '76	Fall Oct 15 '76	Total '76	Long Term Average	No. of Years
	Fremont County							
52	Alkali Flats	ND	ND	E6.20	1.60	--	8.93	15
5	Ant Plot (Lander) Exc.	1.63	3.16	1.44	.90	7.13	8.64	14
157	Bar X	NR	6.65	ND	.40	--	6.61	7
89	Birds Eye Ranch	3.26	4.23	1.73	1.52	10.74	8.15	13
10	Boysen Reservoir Exc.	.28	2.32	1.83	1.20	5.63	5.03	17
85	Bridger Creek Ranch	NR	NR	5.17	2.87	8.04	10.85	14
49	Canyon Creek	NR	NR	6.90	.81	7.71	8.76	15
59	Carter Divide Exc.	1.15	3.33	.81	1.10	6.39	8.37	15
88	Comet Mine	NR	NR	10.50	2.30	12.80	11.84	14
60	Dishpan Butte #1 Exc.	2.71	6.25	1.16	1.30	11.42	11.26	14
61	Dishpan Butte #2 Exc.	1.65	6.00	1.50	.77	9.92	9.81	14
86	Dry Creek	NR	NR	5.18	1.80	6.98	6.96	16
58	Empty Cartridge Exc.	1.50	3.20	1.80	.83	7.33	8.17	11
55	Fraser Seed Plot	NR	NR	7.38	.78	8.16	9.10	14
48	Fuller Seed Plot	1.29	E1.00	E3.48	.88	6.65	8.42	16
46	Gibbs Butte	NR	NR	NR	6.12	6.12	7.00	16
6	Granite Mtn. Exc.	1.86	NR	5.72	.86	8.44	8.77	13
62	Hall Creek Divide Exc.	2.42	4.35	2.29	.60	9.66	12.03	15
87	Hoodoo Creek	NR	NR	6.03	1.20	7.23	6.58	16
64	Hudson	1.50	3.86	1.00	.86	7.04	9.48	15
68	Johnson	NR	NR	5.53	1.09	6.62	7.18	14
63	Little Pope Agie	1.40	5.75	1.60	.82	9.57	11.44	15
56	Logan #1 Exc.	1.58	3.00	1.36	.80	6.74	9.15	15
57	Logan #2 Exc.	1.58	2.55	2.02	.89	7.04	8.55	14
16	Lower Gov't Draw #2 Exc.	1.77	4.50	2.61	.80	9.68	10.85	15
81	Mack Ranch	NR	NR	10.27	1.45	11.72	8.58	12
67	Madden	NR	NR	6.08	1.49	7.57	9.74	15
14	McGraw Flat Exc.	1.52	3.50	1.67	.85	7.54	9.86	14
47	Muskrat Creek	1.65	E3.25	E1.20	.68	E6.88	7.02	14
50	Muskrat #5 Exc.	2.25	3.00	1.24	1.55	8.04	8.81	15
51	Poison Creek	1.74	NR	3.95	1.50	7.19	7.79	14
80	Poison Draw	NR	NR	6.33	1.13	7.46	7.22	16
65	Sand Draw	1.83	4.00	2.43	.50	8.76	9.19	13
169	Shoshoni Ant #2 Exc.	1.96	NR	5.17	1.40	8.53	8.83	5
170	Shoshoni Ant #4 Exc.	1.97	NR	5.89	1.44	9.30	8.44	5
158	Shoshoni Ant #7 Exc.	1.80	NR	E5.50	1.62	E8.92	8.87	6
171	Shoshoni Ant #9 Exc.	1.76	NR	5.76	1.63	9.15	8.56	5
172	Shoshoni Ant #8 Exc.	2.06	NR	6.06	1.68	9.80	8.70	5
173	Shoshoni Ant #11 Exc.	1.94	NR	5.68	1.38	9.00	8.70	5
11	Sweetwater Exc.	2.58	ND	1.74	.52	--	8.89	13
9	Upper Gov'd Draw #1 Exc.	1.43	5.65	2.71	.69	10.48	9.25	15
	Natrona County							
143	Arminto Exc.	2.70	3.97	.65	1.70	9.02	9.28	9
109	Bolton Creek	5.10	2.95	.98	.90	9.93	9.35	8
141	Donlin	1.50	3.60	1.12	1.50	7.72	7.72	9
110	E.K.	2.70	3.97	.65	1.70	9.02	9.28	9
142	Merino	2.30	6.02	.75	1.80	10.87	9.31	9
108	Mud Springs	4.51	3.07	2.25	1.55	11.38	11.75	9
107	Owl Draw	5.51	3.24	E2.00	1.35	E12.10	10.32	10
144	Poison Spider	1.57	5.32	1.63	1.37	9.89	9.40	9
106	Stinking Creek	4.58	3.05	2.95	1.05	11.63	10.08	10
	Carbon County							
186	Flattop	2.76	2.89	.70	.93	7.28	9.22	4
27	Little Robber #5	3.23	3.54	.86	.45	8.08	9.82	14
128	Oppenheimer #1	3.69	3.22	.69	.57	8.17	9.79	9
124	Poison Butte #1	3.92	3.34	.88	.65	8.79	10.74	9
125	Poison Butte #2	4.85	3.34	.79	.70	9.68	10.72	9
130	Powder Rim Pasture C#1	2.71	3.83	.23	.77	7.54	8.43	9
26	Red Wash #1	2.26	3.18	.40	.29	6.13	8.21	15
25	Red Wash #3	1.62	2.48	.18	.26	4.54	8.49	15

TABLE I. (continued)

Rain Gauge No.	Rain Gauge Name	Winter Apr 15 '76	Spring July 1 '76	Summer Sept 1 '76	Fall Oct 15 '76	Total '76	Long Term Average	No. of Years
	Sweetwater County							
20	Black Mtn. Exc.	NR	2.55	ND	.43	--	7.55	14
30	Boars Tusk Exc.	--	--	--	--	--	7.57	11
18	Cedar Mtn. Exc.	NR	5.68	ND	.62	--	8.47	14
102	Chandler Simpson Well	1.56	.63	ND	.13	--	6.00	7
197	Costello Creek	NR	NR	NR	NR	10.70	11.38	5
103	Daley Hay Corral	2.45	1.89	E2.25	.47	E7.06	7.24	10
2	Farson Exc.	--	--	--	--	--	6.52	12
104	J. O. Headquarters	1.97	2.24	E2.50	.35	E706	7.90	11
105	Len Hay Corral	2.57	1.33	ND	.12	--	6.95	10
131	Powder Rim Pasture D#1 Exc.	2.36	3.93	.33	.55	7.17	7.79	9
136	Powder Rim Pasture B#1E Exc.	E2.75	3.44	.86	.46	E7.51	8.78	9
137	Powder Rim Pasture B#2 Exc.	4.83	3.43	.80	.54	9.60	10.76	9
139	Powder Rim Pasture A#1 Exc.	3.18	3.92	.86	.47	8.43	9.34	9
19	Radio Tower Exc.	2.73	2.55	E3.00	.72	E9.00	7.46	16
196	Red Creek Ranch	NR	NR	NR	NR	11.20	13.24	5
28	Red Wash #2 Exc.	1.01	2.51	.56	.14	4.22	7.40	15
101	Ten-Mile Ridge	2.01	1.68	ND	.20	--	5.51	8
	Uinta County							
31	Cumberland #1	E2.30	2.57	ND	ND	--	8.29	11
34	Cumberland #4	E2.73	2.48	ND	ND	--	8.61	11
	Lincoln County							
32	Cumberland #2	E2.25	3.13	ND	ND	--	9.60	12
33	Cumberland #3	E4.35	2.91	ND	ND	--	11.27	12
35	Elk Mtn. Pit	E6.50	ND	ND	ND	--	9.37	11
	Sublette County							
187	Antelope Exc.	LR	4.07	2.84	.81	--	7.97	2
188	North Mesa	--	--	--	--			
189	Sand Draw Pasture	LR	2.70	1.26	.40	--	4.24	2
190	North Alkali	LR	2.41	.35	.23	--	5.18	2

GI = Gauge installed.
NR = Not read till later period.
ND = No data.
E = Estimated data.
LR = Late reading - includes 18 months from Oct. 15, 1974, to April 15, 1976.

TABLE II. Precipitation data from selected U. S. Weather Bureau Stations for the period October 15, 1975, to October 15, 1976.1/

Section Name	Winter Oct 16 to Apr 15	Spring Apr 16 to Jul 1	Summer Jul 1 to Sept 1	Fall Sept 1 to Oct 15	1976 Totals2/	Long Term Average3/	Years of Record
Green River Drainage							
Farson	2.15	4.16	.48	.75	7.54	7.61	53
Fontenelle Dam	2.26	2.43	.39	.18	5.26	6.83	14
Green River	2.41	E3.38	---	---	---	8.24	70
Kemmerer 45W	2.51	E3.93	1.80	.32	E8.56	9.53	43
LaBarge 4 WNW	2.91	2.90	2.95	.60	9.36	8.57	14
Pinedale	3.30	4.15	1.94	1.56	10.98	11.23	53
Rock Springs	4.87	4.29	1.14	1.15	11.45	8.11	36
Rock Springs FAA AP	4.80	2.31	3.27	.65	11.03	8.79	44
Wamsutter	1.16	1.79	1.04	.39	4.38	6.12	36
Big Piney	---	---	---	---	---	8.40	39
Big Horn Drainage							
Anchor Dam	5.14	4.58	1.46	2.32	13.50	15.39	15
Basin	1.64	2.28	.58	1.56	6.06	6.58	69
Black Mtn.	5.81	E4.91	3.35	3.37	E17.44	12.95	14
Cody	3.06	4.31	.89	1.80	10.06	9.63	66
Cody 12 SE	4.62	5.22	.99	1.65	12.48	11.71	14
Deaver	.59	2.49	1.52	1.05	5.65	5.61	58
Emblem	1.81	3.50	.43	1.38	7.12	7.27	30
Grass Creek	---	4.44	2.83	2.37	---	10.50	24
Greybull	4.17	4.96	.73	1.29	11.15	6.89	25
Heart Mtn.	3.36	3.92	.62	1.44	9.34	7.93	28
Lovell	.99	2.43	1.87	1.29	6.58	6.95	64
Powell	1.50	3.19	.86	1.11	6.66	6.09	67
Rairden 2 WSW	2.53	2.63	1.34	1.19	7.69	6.13	25
Shell 4 ENE	---	---	---	---	---	9.84	18
Sunshine 2 ENE	4.57	E7.44	3.35	1.70	E17.06	14.46	14
Tensleep 4 NE	5.01	4.49	2.66	3.35	15.51	13.24	13
Tensleep 16 SSE	3.93	3.94	1.22	2.67	11.76	12.85	
Thermopolis 2	4.90	5.35	2.97	3.39	16.61	11.17	12
Thermopolis 25 WNW	2.94	5.01	2.29	1.53	11.77	11.87	19
Worland	2.66	3.42	1.24	1.49	8.81	7.40	63
Worland FAA AP	2.34	3.60	1.63	1.63	9.20	7.20	16
Wind River Drainage							
Boysen Dam	1.55	5.82	1.34	E1.85	E10.56	9.28	30
Ft. Washakie 2 S	3.65	4.54	1.68	.79	10.66	12.30	68
Gas Hills 4 E	3.87	5.05	2.08	.53	11.53	9.84	14
Lander W50 AP	4.21	5.04	1.45	.95	11.65	13.84	85
Lost Cabin	1.54	4.68	1.67	1.74	9.63	8.27	15
Pavillion	1.74	3.26	1.82	.87	7.69	8.82	52
Riverton	1.65	3.28	1.76	.29	6.98	8.56	57
Sand Draw	2.70	E4.21	E1.77	---	---	9.79	29
Shoshoni	2.06	3.12	1.45	.89	7.52	6.67	36
Upper Platte Drainage							
Bates Creek 2	4.96	6.32	2.77	1.93	15.98	12.99	8
Muddy Gap	2.36	E2.14	---	---	---	9.60	27
Rawlins FAA AP	2.94	3.25	.64	.26	7.09	8.87	37
South Pass City	6.17	4.86	2.51	.35	13.89	13.73	15

1/ Weather Bureau, 1976. Climatological Data-Wyoming Annual Summary of Commerce. Vols. 83-84.

2/ Computed for the period October 15, 1975, to October 15, 1976.

3/ Weather Bureau, 1975. Climatological Data-Wyoming Annual Summary, U. S. Dept. of Commerce, Vol. 83, No. 13.

SECTION IV

EXCLOSURE STUDIES (PRODUCTION, COVER, AND PRECIPITATION PHASE)

1976

Introduction

Studies of vegetation forage production from several exclosures and relic areas of the Big Horn and Wind River Basins were initiated during the 1962 field season. These studies have been expanded and continued annually since that time to include 40 different exclosures throughout the western half of Wyoming. The objectives of the program are to determine:

(1) the relationship of vegetation production with phenodynamics and environmental data;

(2) the relationship of annual herbage production to area cover percentage;

(3) the influence of some range improvement practices on herbage production and area cover;

(4) the relationship of percentage frequency to area cover and herbage production.

Methods and Procedures

Area cover and herbage production studies on sagebrush-grass sites were conducted on transects of 20 quadrats, 1' x 1', spaced systematically along a randomly located 100' steel tape.

On sites dominated by saltbush, a variation of the sampling technique, described in the 1968 results, was used to measure herbage production. Twenty 1' x 10' plots were located systematically along a randomly located 100' steel tape. Each 1' x 10' plot was subsampled for vegetative cover using 10 1' x 1' plots.

Area cover of all herbaceous semi-woody and woody species was estimated within each square foot plot. Data of shrub crown cover and basal cover of plains pricklypear, Hood's phlox and Hooker sandwort were not combined when comparing area cover to herbaceous production since this group of plants was not clipped.

Forage production was determined by clipping herbaceous species at ground or crown level. The clipping procedure was conducted on or near the same date as the previous year for each exclosure. Clippings were oven-dried at 70° C for 24 hours prior to weighing.

On areas where animal use had occurred prior to clipping, utilization estimates by species were made. These estimates were made at the same time and within each plot when clipped. The utilization values were averaged by species for the 20 plots and later used to adjust production for herbage lost by utilization.

As in 1968 and 1971 through 1975, by adding the shrubby and mat forming species production to the clipped production, an index of total production was derived. Shrub and mat forming plant production was obtained by a modified double-sampling technique during late September and October. Weight units were estimated on 20 quadrats, 4' x 5', spaced

6 - 12 steps apart across the study area. Weight units of characteristic shape and size are determined before estimates were made. Later 2 to 3 weight units per species are clipped. After drying in the oven at 70° C for 96 hours each unit was weighed. Average unit weights were later used to change the estimated units to grams and then to pounds per acre.

At the same time clipped production data was collected, pictures of the transects were taken for an annual pictoral record of each study location.

Precipitation data was recorded from simple aluminum rain gauges installed at each exclosure. The rain gauge diameter was 2.75 inches. Each 100 milliliters of water recorded in the gauge equaled one inch of precipitation. Oil was added to each gauge to prevent evaporation. During the winter months antifreeze was added in known amounts to avoid freezing damage. Precipitation data was collected four times a year -- April 15, July 1, September 1 and October 15.

Results 1976

The information presented in this annual report of 1976 data is in the same format as past Arid Land Ecology Annual Reports. Names of plants which occurred in the production study areas are shown in Table I. Included are four letter code, genus, species, common name, life form and characteristic longevity of the plants. Table II gives an alphabetical listing of study areas, the county where each is located and the treatments studied at each area. Table III lists the exclosures and utilization percentages for sites where utilization had occurred. Study areas not mentioned showed no significant amount of utilization. Table IV provides basal cover, frequency, production and precipitation data on summary sheets, one summary for each study area treatment. An intra-table index for each study area is included.

Herbage production on each study area data sheet is summarized for the summer clipped production estimates of herbaceous species and separately listed are the estimates for shrubs and woody mat form species. Total production for locations where utilization of vegetation had occurred prior to clipping has been calculated.

Herbage production estimates for 1976 were compared with the data from the previous three years. The plant growth during 1976 was the same as 1973, 15% higher than 1974, and 35% lower than 1975. Area cover percentage and production of annual grasses and forbs were lower in 1976 than 1975. The perennial grass production for 1976 was higher than previous years. *Poa secunda* and *Agropyron smithii* showed the greatest increase in production, the latter the greatest increase in area cover. Shrub production for the year was considerably lower than 1975. The greatest decrease was exhibited by *Artemisia tridentata*.

Precipitation totals for the year averaged slightly above the long term averages at the study sites. Annual accumulated precipitation through the early growing season, however, was much below average, which undoubtly affected plant growth of the both annual and perennial species. Late June rains were very beneficial to growth and subsequent total annual herbage production of perennial grasses. The accumulation of total precipitation did not rise above average until rains occurred in September and October. This was too late however to have any significant effect on shrub production. The decrease in shrub and annual grasses production was responsible for most total herbage production differences between 1976 and 1975.

TABLE I.. LIST OF PLANT NAMES WHICH OCCURRED IN PRODUCTION STUDY AREAS

Code	Genus-Species	Common Name	Life Form	Longevity
AGCR	Agropyron cristatum	Crested wheatgrass	Grass	Perennial
AGGL	Agoseris glauca	Pale agoseris	Forb	Perennial
AGGR	Agropyron griffithsii	Griffith's wheatgrass	Grass	Perennial
AGSM	Agropyron smithii	Western wheatgrass	Grass	Perennial
AGSP	Agropyron spicatum	Bluebunch wheatgrass	Grass	Perennial
ALTE	Allium textile	Prairie onion	Forb	Perennial
ANDI	Antennaria dimorpha	Low pussytoe	Forb	Perennial
ARFR	Artemisia frigida	Fringed sagewort	Half-shrub	Perennial
ARHO	Arenaria hookeri	Hooker sandwort	Forb	Perennial
ARHO$_2$	Arabis holboellii	Holboell rockcress	Forb	Perennial
ARLO^2	Artemisia longiloba	Alkali sagebrush	Shrub	Perennial
ARLO	Aristida longiseta	Red three-awn	Grass	Perennial
ARNO	Artemisia nova	Black sagebrush	Shrub	Perennial
ARPE	Artemisia pedatifida	Birdsfoot sagewort	Half-shrub	Perennial
ARSP	Artemisia spinescens	Bud sagewort	Half-shrub	Perennial
ARTR	Artemisia tridentata	Big sagebrush	Shrub	Perennial
ASDI	Astragalus diversifolius	Meadow milkvetch	Forb	Perennial
ASMI$_2$	Astragalus miser	Timber milkvetch	Forb	Perennial
ASPU^2	Astragalus purshii	Pursh loco	Forb	Perennial
ASSP	Astragalus spatulatus	Tufted milkvetch	Forb	Perennial
AST	Astragalus spp.	Milkvetch	Forb	Perennial
ATCO	Atriplex confertifolia	Shadscale saltbush	Shrub	Perennial
ATBA	Atriplex gardneri	Gardner saltbush	Half-shrub	Perennial
BOGR	Bouteloua gracilis	Blue grama	Grass	Perennial
BRJA	Bromus japanicus	Japanese chess	Grass	Annual
BRTE	Bromus tectorum	Cheatgrass	Grass	Annual
CAEL	Carex eleocharis	Needleleaf sedge	Sedge	Perennial
CAFI	Carex filifolia	Threadleaf sedge	Sedge	Perennial
CAMI	Camelina microcarpa	Littlepod falseflax	Forb	Annual
CAS	Castilleja spp.	Paintbrush	Forb	Perennial
CHDO	Chaenactis douglasii	Douglas dustymaiden	Forb	Perennial
CELA	Ceratoides lanata	Winterfat	Half-shrub	Perennial
CHFR	Chenopodium fremontii	Fremont goosefoot	Forb	Annual
CHNA	Chrysothamnus nauseosus	Rubber rabbitbrush	Shrub	Perennial
CHVI	Chrysothamnus viscidiflorus	Douglas rabbitbrush	Shrub	Perennial
CIR	Cirsium spp.	Thistle	Forb	Perennial
COM	Compositae		Forb	
COPA	Comandra pallida	False toadflax	Forb	Perennial
CORA	Cordylanthus ramosus	Branched birdbeak	Forb	Annual
CRBR	Cryptantha bradburiana	Miners candle	Forb	Perennial
CRFL	Cryptantha flavoculata	Roughseed cryptantha	Forb	Perennial
CYMO	Cymopterus montanus	False carrot	Forb	Perennial
DEPI	Descurainia pinnata	Pinnate tansymustard	Forb	Annual
ERCE	Eriogonum cernuum	Nodding wildbuckwheat	Forb	Annual
ERMI	Eriogonum microthecum	Slenderbrush wildbuckwheat	Forb	Perennial
EROC	Erigeron ochroleucus	Fleabane	Forb	Perennial
EROV	Eriogonum ovalifolium	Cushion wildbuckwheat	Forb	Perennial
ERPU	Erigeron pumilus	Low fleabane	Forb	Perennial
ERSU	Eriogonum subaplinum	Subalpine eriogonum	Forb	Perennial
FEID	Festuca idahoensis	Idaho fescue	Grass	Perennial
GACO	Gaura coccinea	Scarlet gaura	Forb	Perennial
GISP	Gilia spicata	Spike gilia	Forb	Perennial
GRSP	Grayia spinosa	Spiny hopsage	Shrub	Perennial
HAGL	Halogeton glomeratus	Halogeton	Forb	Annual

TABLE I (continued)

Code	Genus-Species	Common Name	Life Form	Longevity
HEAN	Helianthus annuus	Annual sunflower	Forb	Annual
JUOS	Juniperus osteosperma	Utah juniper	Tree	Perennial
KOCR	Koeleria cristata	Prairie junegrass	Grass	Perennial
LARE	Lappula redowskii	Bluebur stickseed	Forb	Annual
LATE	Lappula texana	Stickseed	Forb	Annual
LEAL	Lesquerella alpina	Alkaline bladderpod	Forb	Perennial
LEDE	Lepidium densiflorum	Prairie pepperweed	Forb	Annual
LEPE	Lepidium perfoliatum	Clasping pepperweed	Forb	Annual
LEPU	Leptodactylon pungens	Granite gilia	Forb	Perennial
LILE	Linum lewisii	Lewis flax	Forb	Perennial
LOSI	Lomatium simplex	Narrowleaf lomatium	Forb	Perennial
MACA	Machaeranthera canescens	Hoary aster	Forb	Perennial
MATA	Machaeranthera tanacetifolia	Aster	Forb	Annual
MUDI	Musineon divaricatum	Falsecarrot	Forb	Perennial
OPPO	Opuntia polyacantha	Plains pricklypear	Forb	Perennial
ORHY	Oryzopsis hymenoides	Indian ricegrass	Grass	Perennial
PEN	Penstemon spp.	Penstemon	Forb	Perennial
PHHO	Phlox hoodii	Hood's phlox	Forb	Perennial
PHLO	Phlox longifolia	Long-leaf phlox	Forb	Perennial
PHMU	Phlox multiflora	Flowery phlox	Forb	Perennial
PLPA	Plantago patagonica	Wooly indianwheat	Forb	Annual
PLSP	Plantago spinescens	Spiny indianwheat	Forb	Annual
POAV	Polygonum aviculare	Prostrate knotweed	Forb	Annual
POFE	Poa fendleriana	Muttongrass	Grass	Perennial
POSE	Poa secunda	Sandberg bluegrass	Grass	Perennial
PSTE	Psoralea tenuiflora	Slimflower scurfpea	Forb	Perennial
SAKA	Salsola kali	Russian thistle	Forb	Annual
SAVE	Sarcobatus vermiculatus	Greasewood	Shrub	Perennial
SECA	Senecio canus	Woolly groundsel	Forb	Perennial
SED	Sedum spp.	Stonecrop	Forb	Perennial
SIHY	Sitanion hystrix	Squirreltail bottlebrush	Grass	Perennial
SILI	Sisymbrium linifolium	Tumblemustard	Forb	Annual
SPAI	Sporobolus airoides	Alkali sacaton	Grass	Perennial
SPCO	Sphaeralcea coccinea	Scarlet globemallow	Forb	Perennial
SPCR	Sporobolus cryptandrus	Sand dropseed	Grass	Perennial
STCO	Stipa comata	Needleandthread	Grass	Perennial
SYOC	Symphoricarpos occidentalis	Western snowberry	Shrub	Perennial
TECA	Tetradymia canescens	Gray horsebrush	Shrub	Perennial
TESP	Tetradymia spinosa	Cottonthorn horsebrush	Shrub	Perennial
TOIN	Townsendia incana	Hoary townsendia	Forb	Perennial
TRI	Trifolium spp.	Clover	Forb	
VUOC	Vulpia octoflora	Common sixweeksgrass	Grass	Annual
XASA	Xanthocephalum sarothrae	Broom snakeweed	Half-shrub	Perennial
ZYVE	Zygadenus venenosus	Death camas	Forb	Perennial

TABLE II. An alphabetical listing of study areas, the county where each occurs, the treatments studied at each area, and table of contents.

County Name Code	Exclosure Name	County	Treatment	Page
2017	Big Trails G.R.I. Exc.	Washakie	Inside Spray	
			Outside Native	
1002	Boysen Reservoir Exc.	Fremont	Inside Native	
			Outside Native	
2007	Bud Kimball Exc.	Washakie	Inside Native	
			Outside Native	
			Inside Spray	
			Outside Spray	
2002	Buffalo Creek Exc.	Washakie	Inside Native	
			Outside Native	
2003	Burnt Wagon Exc.	Washakie	Inside Native	
			Outside Native	
1501	Cochran Exc.	Hot Springs	Inside Native	
			Inside Pitted	
			Outside Native	
			Outside Spray	
1901	Cumberland Exc. #1	Uinta	Inside Native	
			Outside Native	
			Inside Spray	
			Outside Spray	
1201	Cumberland Exc. #2	Lincoln	Inside Native	
			Outside Native	
			Inside Spray	
			Outside Spray	
1202	Cumberland Exc. #3	Lincoln	Inside Native	
			Outside Native	
			Inside Spray	
			Outside Spray	
1902	Cumberland Exc. #4	Uinta	Inside Native	
			Outside Native	
2004	Demer	Washakie	Inside Native	
			Outside Native	
2005	Dutch Nick Exc.	Washakie	Inside Native	
			Outside Native	
0404	Farson Exc.	Sweetwater	Inside Native	
			Outside Native	
1007	Granite Mountain Exc.	Fremont	Inside Native	
			Outside Native	
			Inside Spray	
			Outside Spray	
0901	Halogeton Pasture Exc. #1	Big Horn	Inside Native	
0905	Halogeton Pasture Exc. #2	Big Horn	Inside Native	
0903	Halogeton Pasture Exc. #3	Big Horn	Inside Native	
0913	Horse Creek Exc.	Big Horn	Inside Agsp	
			Outside Agsp	
			Inside Agsm	
			Outside Agsm	

TABLE I I.(continued)

County Name Code	Exclosure Name	County	Treatment	Page
0914	Kane Deer Exc.	Big Horn	Inside Native	
			Outside Native	
			Inside Spray	
			Outside Spray	
0921	Kane G.R.I. Exc.	Big Horn	Inside Native	
			Outside Spray	
1502	Kirby Creek Exc.	Hot Springs	Inside Native	
			Outside Native	
1001	Lander Ant Exc.	Fremont	Inside Native	
			Outside Native	
1003	Lower Gov't Draw Exc.	Fremont	Inside Native	
			Outside Native	
			Inside Spray	
			Outside Spray	
1004	McGraw Flat Exc.	Fremont	Inside Native	
			Outside Native	
0920	Medicine Lodge G.R.I. Exc.	Big Horn	Inside Spray	
			Outside Native	
2301	Mesa Antelope	Sublette	Inside Native	
			Outside Native	
1503	North Butte Relic Area	Hot Springs	Native	
1504	Round Top Relic Area	Hot Springs	Native	
1505	Sand Gulch Exc.	Hot Springs	Inside Native	
			Outside Native	
1009	Shoshone Ant Exc. #2 North	Fremont	Inside Native	
	South		Inside Native	
			Outside Native	
1011	Shoshone Ant Exc. #4 North	Fremont	Inside Native	
	South		Inside Native	
			Outside Native	
1013	Shoshone Ant Exc. #7 North	Fremont	Inside Native	
	South		Inside Native	
			Outside Native	
1014	Shoshone Ant Exc. #8 North	Fremont	Inside Native	
	South		Inside Native	
			Outside Native	
1015	Shoshone Ant Exc. #9 North	Fremont	Inside Native	
	South		Inside Native	
			Outside Native	
1017	Shoshone Ant Exc. #11 North	Fremont	Inside Native	
	South		Inside Native	
			Outside Native	
2009	Smilo Exc.	Washakie	Inside Native	
			Outside Native	
			Inside Spray	
			Outside Spray	

TABLE II.(continued)

County Name Code	Exclosure Name	County	Treatment	Page
1005	Sweetwater Exc.	Fremont	Inside Arno	
			Outside Arno	
			Inside Artr	
			Outside Artr	
2010	Two Mile Hill Exc.	Washakie	Inside Native	
			Outside Native	
1006	Upper Gov't Draw Exc.	Fremont	Inside Native	
			Outside Native	
			Inside Spray	
			Outside Spray	
2006	West Pasture Exc.	Washakie	Inside Native	
			Outside Native	

TABLE III. Adjustments in production for utilization occurring prior to clipping.

Exclosure	Treatment	Species	% Utilization	Utilization Lbs./Acre
Boysen	Out native	BOGR	05	13.33
Bud Kimball	Out native	AGSM	30	70.91
	Out spray	AGSM	35	77.15
Buffalo Creek	Out native	AGSM	20	22.01
		AGSP	20	20.80
				42.81
Cochran	Out native	AGSM	20	27.85
	Out spray	AGSM	25	88.59
Cumberland #1	Out native	AGSM	50	21.89
		ORHY	50	6.72
		SIHY	50	9.07
				37.68
	Out spray	AGSM	55	101.82
		POSE	35	1.39
				103.21
Cumberland #2	Out native	AGSM	50	60.30
		POFE	35	8.61
		POSE	25	0.72
				69.60
	Out spray	AGSM	50	48.06
		POFE	40	4.38
		POSE	30	4.79
				57.23
Cumberland #3	Out native	AGSM	30	39.38
		AGSP	30	12.30
		POSE	35	2.82
		STCO	10	1.82
				56.32
	Out spray	AGSM	40	59.86
		AGSP	35	82.84
		POFE	35	18.91
		POSE	10	0.77
		STCO	10	2.85
				165.33

TABLE III. (continued)

Exclosure	Treatment	Species	% Utilization	Utilization Lbs./Acre
Cumberland #4	Out native	AGSM	10	0.69
		SIHY	30	16.03
				16.72
Granite Mtn.	Out native	AGSM	20	20.24
		POFE	30	27.16
				47.40
	Out spray	AGSM	25	29.56
		POFE	35	17.29
		POSE	30	10.37
				57.22
Horse Creek	Out AGSM	AGSM	35	38.47
		AGSP	35	8.58
				47.05
	Out AGSP	AGSM	35	32.10
		AGSP	55	22.60
				54.70
Kane Deer	Out native	AGGR	10	4.02
	Out Spray	AGGR	10	5.28
		POSE	10	0.17
				5.45
Kirby Creek	Out native	AGSM	25	3.99
		SPAI	05	0.23
				4.22
Lander	Out native	AGSM	05	2.40
		STCO	10	0.87
				3.27
Lower Gov'tDraw	Out native	AGSM	50	35.00
		STCO	15	2.21
				37.21
	Out spray	AGSM	65	94.25
		STCO	20	4.01
				98.26
McGraw Flat	Out native	AGSM	30	41.67
		POFE	20	11.41
				53.08

TABLE III. (continued)

Exclosure	Treatment	Species	% Utilization	Utilization Lbs./Acre
Medicine Lodge	Out native	AGSP	20	5.70
		FEID	20	0.89
				6.59
Mesa Antelope	Out native	AGSM	30	26.83
Sand Gulch	Out native	AGSM	20	24.97
		AGSP	10	2.77
		POSE	10	1.77
				29.51
Shoshone Ant #2	Out native	AGSM	10	15.50
Shoshone Ant #7	Out native	AGSM	15	3.43
		BOGR	05	3.12
		STCO	20	3.81
				10.36
Shoshone Ant #8	Out native	AGSM	10	7.42
		STCO	10	2.88
				10.20
Shoshone Ant #9	Out native	AGSM	10	3.02
Shoshone Ant #11	Out native	AGSM	10	4.30
		BOGR	05	1.92
				6.22
Smilo	Out native	AGSM	20	11.05
		STCO	10	3.79
				14.84
	Out spray	AGSM	25	23.93
		POSE	10	5.38
		STCO	15	1.05
				30.36
Sweetwater	Out ARNO	KOCR	05	1.93
		STCO	05	10.52
				12.45

TABLE III. (continued)

Exclosure	Treatment	Species	% Utilization	Utilization Lbs./Acre
Upper Gov't Draw	Out native	AGSM	20	9.92
		KOCR	35	15.98
				25.90
	Out spray	AGSM	30	26.18
		KOCR	40	30.95
		POSE	10	1.54
		STCO	40	1.02
				59.69
West Pasture	Out native	ORHY	15	3.46
		SIHY	10	2.34
				5.80

TABLE IV. Vegetation cover data, precipitation and herbage production data alphabetically by exclosure, grazing treatment and shrub control treatment.

		Page
Big Trails GRI Exclosure		334
Boysen	"	336
Bud Kimball	"	338
Buffalo Creek	"	342
Burnt Wagon	"	344
Cochran	"	346
Cumberland #1	"	350
Cumberland #2	"	354
Cumberland #3	"	358
Cumberland #4	"	362
Demer	"	364
Dutch Nick	"	366
Farson	"	368
Granite Mountain	"	370
Halogeton #1	"	374
Halogeton #2	"	375
Halogeton #3	"	376
Horse Creek	"	377
Kane Deer	"	381
Kane GRI	"	385
Kirby Creek	"	387
Lander Ant	"	389
Lower Gov't Draw	"	391
McGraw Flats	"	395
Medicine Lodge GRI	"	397
Mesa Antelope	"	399
North Butte Relic		401
Round Top Relic		402
Sand Gulch Exclosure		403
Shoshoni Ant #2	"	405
Shoshoni Ant #4	"	408
Shoshoni Ant #7	"	411
Shoshoni Ant #8	"	414
Shoshoni Ant #9	"	417
Shoshoni Ant #11	"	420
Smilo	"	423
Sweetwater	"	427
Two Mile Hill	"	431
Upper Gov't Draw	"	433
West Pasture	"	437

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12 19    NOV 04  RUNJCEA...
             2017   BIG      TRAILS G.R.I. JULY   28/76  INSIDE SPRAY

                                NUMBER PLOTS = 20
                                PLOT SIZE 1X1
PLANT   PLANT   TOTAL   AVE.    PERCENT   ABS.     TOTAL   AVE.     WGT./   LBS
CODE    NAME    TRANS   PER-    COMPO-    PLOT     WGT.    WGT.     UNIT    PER
                BASAL   CENT    SITION    FREQ.    GMS/20  /PLOT    BASAL   AC.
                AREA    BASAL             BASE     SQ.FT.  OCCUR-   AREA
                PER-    AREA              20               RENCES
                CENT

  PER GRASS       7.40   0.37                 2      5.33    2.66  0.72   25.59
  3    AGSP       7.00 3.50E-01 4.61E+00  1          5.23    5.23  0.75   2.5113E+01
  3    ARLO       0.40 2.00E-02 2.63E-01  2          0.10    0.05  0.25   4.8017E-01
  ANN GRASS     122.00   6.10                18     38.66    2.15  0.32  185.63
  5    BRTE     122.00 6.10E+00 8.03E+01 18
  ANN FORBS      22.60   1.13                 7      4.13    0.59  0.18   19.83
  4    POAV      22.00 1.10E+00 1.45E+01  7
  4    PLPA       0.60 3.00E-02 3.95E-01  2
     TOTAL               7.60    100.00             4.8120E+01             2.3106E+02

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS


 NO SHRUB DATA COLLECTED.


PRECIPITATION DATA
 RAIN GUAGE NO.        BIG     TRAILS G.R.I. JULY   28/76
OCT. 15 TO APR. 15 =    NR
APR. 15 TO JULY 1  =    8.81
JULY 1 TO SEPT. 1  =    1.07
SEPT. 1 TO OCT. 15 =    2.45
SEASON TOTAL       =   12.33
LONG TERM AVERAGE  =   12.16


 ** NO UTILIZATION
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              2017    BIG     TRAILS G.R.I. JULY    28/76   CUT     NATIVE

                              NUMBER PLOTS = 20
                                PLOT SIZE 1X1
PLANT   PLANT   TOTAL  AVE.     PERCENT   ABS.     TOTAL  AVE.    WGT./   LBS
CODE    NAME    TRANS  PER-     COMPO-    PLOT     WGT.   WGT.    UNIT    PER
                BASAL  CENT     SITION    FREQ.    GMS/20 /PLOT   BASAL   AC.
                AREA   BASAL              BASE     SQ.FT. OCCUR-  AREA
                PER-   AREA               20              RENCES
                CENT

  6    *ARTR     91.00 4.55E+00            5
   PER GRASS      1.50  0.07               2         0.41    0.20  0.27    1.97
  3    POSE       1.50 7.50E-02 2.21E+00   2         0.41    0.20  0.27  1.9687E+00
   PER FORBS      0.60  0.03               2         0.26    0.13  0.43    1.25
  2    ZYVE       0.60 3.00E-02 8.84E-01   2
   ANN GRASS     65.60  3.28              20        26.09    1.30  0.40 125.28
  5    BRTE      65.60 3.28E+00 9.66E+01  20
   ANN FORBS      0.20  0.01               1         0.03    0.03  0.15    0.14
  4    PLPA       0.20 T        2.95E-01   1
     TOTAL             7.94     100.00          2.6790E+01                1.2864E+02

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

 NO SHRUB DATA COLLECTED

PRECIPITATION DATA
 RAIN GUAGE NO.          BIG     TRAILS G.R.I. JULY    28/76
OCT. 15 TO APR. 15 =      NR
APR. 15 TO JULY 1  =     8.81
JULY 1 TO SEPT. 1  =     1.07
SEPT. 1 TO OCT. 15 =     2.45
SEASON TOTAL       =    12.33
LONG TERM AVERAGE  =    13.16

 ** NO UTILIZATION
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          1002   BOYSEN EXCL          JULY   19/76  INSIDE NATIVE

                           NUMBER PLOTS = 20
                              PLOT SIZE 1X1
 PLANT   PLANT   TOTAL   AVE.    PERCENT  ABS.    TOTAL   AVE.    WGT./   LBS
 CODE    NAME    TRANS   PER-    COMPO-   PLOT    WGT.    WGT.    UNIT    PER
                 BASAL   CENT    SITION   FREQ.   GMS/20  /PLOT   BASAL   AC.
                 AREA    BASAL            BASE    SQ.FT.  OCCUR-  AREA
                 PER-    AREA             20              RENCES
                 CENT

   6    *OPPO      7.00 3.50E-01              2
   PER GRASS     295.00 14.75                16     49.45    3.09  0.17 237.44
   3    BOGR     284.00 1.42E+01 8.81E+01   16     47.28    2.95  0.17  2.2702E+02
   3    ORHY      11.00 5.50E-01 3.41E+00    3      2.17    0.72  0.20  1.0420E+01
   PER FORBS      17.30  1.36                17      8.59    0.51  0.31  41.25
   2    AST        1.80 9.00E-02 5.58E-01    3
   2    SPCO      25.50 1.27E+00 7.91E+00   17
      TOTAL            16.46     100.00           5.8040E+01               2.7869E+02

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE

 PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

  OPPO                                                                10.43
                                                          SHRUB PROD. 10.43

                                                          TOTAL       289.13

 PRECIPITATION DATA
  RAIN GUAGE NO.         BOYSEN EXCL          JULY    19/76
 OCT. 15 TO APR. 15 =     0.28
 APR. 15 TO JULY 1  =     2.32
 JULY 1 TO SEPT. 1  =     1.83
 SEPT. 1 TO OCT. 15 =     1.20
 SEASON TOTAL       =     5.63
 LONG TERM AVERAGE  =     5.03

 ** NO UTILIZATION
```

```
           1002   BOYSEN EXCL          JULY   19/76  CUT    NATIVE

                             NUMBER PLOTS = 20
                               PLOT SIZE 1X1
 PLANT  PLANT  TOTAL  AVE.   PERCENT  ABS.   TOTAL  AVE.   WGT./  LBS
 CODE   NAME   TRANS  PER-   COMPO-   PLOT   WGT.   WGT.   UNIT   PER
               BASAL  CENT   SITION   FREQ.  GMS/20 /PLOT  BASAL  AC.
               AREA   BASAL           BASE   SQ.FT. OCCUR- AREA
               PER-   AREA            20            RENCES
               CENT

   6   *ATCO    70.00 3.50E+00           2
    PER GRASS  235.00 11.75             18    52.77   2.93  0.22 253.39
   3    BOGR   235.00 1.18E+01 9.53E+01 18    52.77   2.93  0.22  2.5339E+02
    PER FORBS   11.50  0.57             12     5.11   0.43  0.44  24.54
   2    AST      1.00 5.00E-02 4.06E-01  2
   2    GACO     1.60 8.00E-02 6.49E-01  2
   2    SPCO     8.90 4.45E-01 3.61E+00 12
      TOTAL           15.82   100.00         5.7880E+01           2.7792E+02

           * NOT COMPUTED IN PERCENT COMPOSITION
           T - TRACE

 PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

 OPPO                                                              8.35
                                                    SHRUB PROD.    8.35
                                                    TOTAL        286.27


 PRECIPITATION DATA
  RAIN GUAGE NO.         BOYSEN EXCL          JULY   19/76
 OCT. 15 TO APR. 15 =     0.28
 APR. 15 TO JULY 1  =     2.32
 JULY 1 TO SEPT. 1  =     1.83
 SEPT. 1 TO OCT. 15 =     1.20
 SEASON TOTAL       =     5.63
 LONG TERM AVERAGE  =     5.03


                                                    UTILIZATION   13.33
                                            PRODUCTION ADJUSTED  299.60
           2007    BUD    KIMBAL EXCL    JULY    21/76   INSIDE NATIVE

                              NUMBER PLOTS = 20
                                PLOT SIZE 1X1
 PLANT   PLANT   TOTAL   AVE.    PERCENT   ABS.    TOTAL   AVE.     WGT./   LBS
 CODE    NAME    TRANS   PER-    COMPO-    PLOT    WGT.    WGT.     UNIT    PER
                 BASAL   CENT    SITION    FREQ.   GMS/20  /PLOT    BASAL   AC.
                 AREA    BASAL             BASE    SQ.FT.  OCCUR-   AREA
                 PER-    AREA              20              RENCES
                 CENT

   6    *ARTR   291.00 1.45E+01             10
   6    *PHHO    15.00 7.50E-01              4
   6    *OPPO     8.00 4.00E-01              1
    PER GRASS    53.40  2.67                17     33.02    1.94   0.62 158.55
   3    AGSM     19.40 9.70E-01 3.35E+01  17     18.62    1.10   0.96  8.9408E+01
   3    POSE     34.00 1.70E+00 5.87E+01  17     14.40    0.85   0.42  6.9144E+01
    PER FORBS     3.90  0.19                 6      1.68    0.28   0.43    8.07
   2    ERPU      3.70 1.85E-01 6.39E+00   6
   2    MACA      0.20 T          3.45E-01   1
    ANN GRASS     0.20  0.01                 1      0.01    0.01   0.05    0.05
   5    BRTE      0.20 T          3.45E-01   1
    ANN FORBS     0.40  0.02                 1      0.35    0.35   0.87    1.68
   4    DEPI      0.40 2.00E-02 6.91E-01   1
      TOTAL            18.59    100.00          3.5060E+01            1.6835E+02

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE

 PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

  ARTR                                                                 152.06
  OPPO                                                                  11.71
  PHHO                                                                   8.88
                                                  SHRUB PRODUCTION    172.65

                                                           TOTAL      341.00

 PRECIPITATION DATA
  RAIN GUAGE NO.          BUD      KIMBAL EXCL     JULY    21/76
 OCT. 15 TO APR. 15  =    2.44
 APR. 15 TO JULY 1   =    3.85
 JULY 1 TO SEPT. 1   =    1.20
 SEPT. 1 TO OCT. 15  =    2.52
 SEASON TOTAL        =   10.51
 LONG TERM AVERAGE   =    9.41

  ** NO UTILIZATION
```

```
            2007    BUD     KIMBAL EXCL    JULY    21/76   OUT     NATIVE

                             NUMBER PLOTS = 20
                                PLOT SIZE 1X1
 PLANT  PLANT   TOTAL  AVE.   PERCENT  ABS.   TOTAL  AVE.    WGT./  LBS
 CODE   NAME    TRANS  PER-   COMPO-   PLOT   WGT.   WGT.    UNIT   PER
                BASAL  CENT   SITION   FREQ.  GMS/20 /PLOT   BASAL  AC.
                AREA   BASAL           BASE   SQ.FT. OCCUR-  AREA
                PER-   AREA            20            RENCES
                CENT

   6    *ARTR   127.00 6.35E+00           8
   6    *OPPO     9.00 4.50E-01           1
   6    *PHHO     6.30 3.15E-01           4
    PER GRASS    83.30  4.16             20     51.21    2.56   0.61 245.89
   3     AGSM    35.20 1.76E+00 4.15E+01 20     34.46    1.72   0.98  1.6547E+02
   3     POSE    46.10 2.30E+00 5.44E+01 18     16.09    0.89   0.35  7.7259E+01
   3     SIHY     2.00 1.00E-01 2.36E+00  1      0.66    0.66   0.33  3.1691E+00
    PER FORBS     1.50  0.07              3      0.70    0.23   0.47   3.36
   2     ERPU     1.50 7.50E-02 1.77E+00  3
      TOTAL           11.35    100.00          5.1910E+01             2.4926E+02

          * NOT COMPUTED IN PERCENT COMPOSITION
          T - TRACE

 PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

 ARTR                                                                 68.93
 OPPO                                                                 12.28
 PHHO                                                                 11.73
                                                   SHRUB PRODUCTION   92.94
                                                              TOTAL  342.20

 PRECIPITATION DATA
  RAIN GUAGE NO.          BUD     KIMBAL EXCL    JULY    21/76
 OCT. 15 TO APR. 15 =     2.94
 APR. 15 TO JULY 1  =     3.85
 JULY 1 TO SEPT. 1  =     1.20
 SEPT. 1 TO OCT. 15 =     2.52
 SEASON TOTAL       =    10.51
 LONG TERM AVERAGE  =     9.41

                                                UTILIZATION       70.91
                                          PRODUCTION ADJUSTED    413.11
          3007   BUD    KIMBAL EXCL    JULY    21/76   INSIDE SPRAY

                           NUMBER PLOTS = 20
                             PLOT SIZE 1X1
PLANT  PLANT   TOTAL  AVE.    PERCENT  ABS.    TOTAL   AVE.    WGT./   LBS
CODE   NAME    TRANS  PER-    COMPO-   PLOT    WGT.    WGT.    UNIT    PER
               BASAL  CENT    SITION   FREQ.   GMS/20  /PLOT   BASAL   AC.
               AREA   BASAL            BASE    SQ.FT.  OCCUR-  AREA
               PER-   AREA             20              RENCES
               CENT

  6    *OPPO   10.00 5.00E-01            2
   PER GRASS   52.90  2.64              18      37.81    2.10   0.71 181.55
  3    AGSM    20.60 1.03E+00 1.24E+01  18      24.76    1.38   1.20  1.1889E+02
  3    POSE    32.30 1.61E+00 1.94E+01  11      13.05    1.19   0.40  6.2662E+01
   PER FORBS    5.50  0.27               4       1.97    0.49   0.36    9.46
  2    ERPU     5.50 2.75E-01 3.31E+00   4
   ANN GRASS  107.80  5.39              18      79.01    4.39   0.73 379.38
  5    BRTE    98.50 4.92E+00 5.93E+01  18
  5    VUOC     9.30 4.65E-01 5.60E+00  11
     TOTAL             8.81   100.00           1.1879E+02              5.7039E+02

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS
```

OPPO	11.32
PHHO	0.86
SHRUB PRODUCTION	12.18
TOTAL	582.57

```
PRECIPITATION DATA
 RAIN GUAGE NO.          BUD     KIMBAL EXCL    JULY    21/76
OCT. 15 TO APR. 15  =    2.94
APR. 15 TO JULY 1   =    3.85
JULY 1 TO SEPT. 1   =    1.20
SEPT. 1 TO OCT. 15  =    2.52
SEASON TOTAL        =   10.51
LONG TERM AVERAGE   =    9.41
```

** NO UTILIZATION

```
            2007    BUD     KIMBAL EXCL     JULY    21/76   CUT     SPRAY

                                  NUMBER PLOTS = 20
                                    PLOT SIZE 1X1
  PLANT   PLANT   TOTAL   AVE.    PERCENT   ABS.   TOTAL   AVE.    WGT./   LBS
  CODE    NAME    TRANS   PER-    COMPO-    PLOT   WGT.    WGT.    UNIT    PER
                  BASAL   CENT    SITION    FREQ.  GMS/20  /PLOT   BASAL   AC.
                  AREA    BASAL             BASE   SQ.FT.  OCCUR-  AREA
                  PER-    AREA              20             RENCES
                  CENT

     6    *ARTR    82.00 4.10E+00              1
     6    *OPPO    14.00 7.00E-01              3
      PER GRASS    82.30  4.11                20     41.54    2.08  0.50 199.46
     3    AGSM     32.80 1.64E+00 2.69E+01    20     30.07    1.50  0.92  1.4439E+02
     3    POSE     49.50 2.47E+00 4.06E+01    18     11.47    0.64  0.23  5.5075E+01
      PER FORBS     0.50  0.02                 1      0.19    0.19  0.38   0.91
     2    ERPU      0.50 2.50E-02 4.10E-01     1
      ANN GRASS    38.30  1.91                13      8.02    0.62  0.21  38.51
     5    VUOC     38.30 1.91E+00 3.14E+01    13
      ANN FORBS     0.80  0.04                 1      0.13    0.13  0.16   0.62
     4    UNK1      0.80 4.00E-02 6.56E-01     1
        TOTAL           10.89   100.00               4.9880E+01             2.3951E+02

           * NOT COMPUTED IN PERCENT COMPOSITION
           T - TRACE

  PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

   ARTR                                10.03
   OPPO                                16.82
                       SHRUB PRODUCTION 26.85
                                  TOTAL 266.36

  PRECIPITATION DATA
   RAIN GUAGE NO.        BUD     KIMBAL EXCL     JULY    21/76
  OCT. 15 TO APR. 15 =    2.94
  APR. 15 TO JULY 1  =    3.85
  JULY 1 TO SEPT. 1  =    1.20
  SEPT. 1 TO OCT. 15 =    2.52
  SEASON TOTAL       =   10.51
  LONG TERM AVERAGE  =    9.41

                     UTILIZATION          77.15

                PRODUCTION ADJUSTED      343.53
```

```
          2002   BUFFAL CREEK  EXCL   JULY   27/76  INSIDE NATIVE

                            NUMBER PLOTS = 20
                              PLOT SIZE 1X1
  PLANT  PLANT   TOTAL  AVE.    PERCENT  ABS.    TOTAL  AVE.    WGT./   LBS
  CODE   NAME    TRANS  PER-    COMPO-   PLOT    WGT.   WGT.    UNIT    PER
                 BASAL  CENT    SITION   FREQ.   GMS/20 /PLOT   BASAL   AC.
                 AREA   BASAL            BASE    SQ.FT. OCCUR-  AREA
                 PER-   AREA             20             RENCES
                 CENT

   6    *ARTR   282.00 1.41E+01             11
   6    *OPPO     8.00 4.00E-01              2
   6    *PHHO    12.10 6.05E-01              6
    PER GRASS   144.90  7.24                19     59.70    3.14  0.41 286.66
   3     AGSP   122.30 6.11E+00 8.26E+01 19     51.82    2.73  0.42  2.4882E+02
   3     BOGR     1.00 5.00E-02 6.75E-01  1      0.08    0.08  0.08  3.8414E-01
   3     POSE    21.60 1.08E+00 1.46E+01 12      7.80    0.65  0.36  3.7453E+01
    PER FORBS     0.90  0.04                 2      0.41    0.20  0.46    1.97
   2     ERPU     0.40 2.00E-02 2.70E-01  1
   2     SPCO     0.50 2.50E-02 3.38E-01  2
    ANN GRASS     2.20  0.11                 3      1.29    0.43  0.59    6.19
   5     BRTE     2.20 1.10E-01 1.49E+00  3
    ANN FORBS     0.10  0.00                 1      0.03    0.03  0.30    0.14
   4     PLPA     0.10 T        6.75E-02  1
      TOTAL            22.51    100.00         6.1430E+01              2.9497E+02

         * NOT COMPUTED IN PERCENT COMPOSITION
         T - TRACE

  PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

   ARTR                                                                80.83
   CELA                                                                 0.24
   OPPO                                                                13.30
   PHHO                                                                65.52
                                                  SHRUB PRODUCTION    159.89

                                                             TOTAL    454.86

  PRECIPITATION DATA
   RAIN GUAGE NO.        BUFFAL CREEK  EXCL   JULY   27/76
  OCT. 15 TO APR. 15 =    E4.00
  APR. 15 TO JULY 1  =    E5.00
  JULY 1 TO SEPT. 1  =     2.57
  SEPT. 1 TO OCT. 15 =     2.70
  SEASON TOTAL       =   E14.27
  LONG TERM AVERAGE  =   E10.68

   ** NO UTILIZATION
```

```
          2002    BUFFAL CREEK   EXCL    JULY    27/76   OUT     NATIVE

                              NUMBER PLOTS = 20
                                PLOT SIZE 1X1
 PLANT  PLANT   TOTAL   AVE.    PERCENT   ABS.    TOTAL    AVE.     WGT./    LBS
 CODE   NAME    TRANS   PER-    COMPO-    PLOT    WGT.     WGT.     UNIT     PER
                BASAL   CENT    SITION    FREQ.   GMS/20   /PLOT    BASAL    AC.
                AREA    BASAL             BASE    SQ.FT.   OCCUR-   AREA
                PER-    AREA              20               RENCES
                CENT

  6    *ARTR    46.40  2.32E+00              5
  6    *OPPO    12.00  6.00E-01              1
  6    *PHHO    25.00  1.25E+00              4
   PER GRASS    84.70   4.23                19     46.71     2.46    0.55  224.29
  3     AGSM    20.30  1.01E+00  2.32E+01   16     18.33     1.15    0.90   8.8015E+01
  3     AGSP    23.30  1.16E+00  2.66E+01    8     17.33     2.17    0.74   8.3213E+01
  3     BOGR    12.00  6.00E-01  1.37E+01    4      2.49     0.62    0.21   1.1956E+01
  3     POSE    29.10  1.45E+00  3.33E+01   19      8.56     0.45    0.29   4.1102E+01
   PER FORBS     0.50   0.02                 2      0.20     0.10    0.40    0.96
  2     SPCO     0.50  2.50E-02  5.71E-01    2
   ANN GRASS     1.80   0.09                 5      0.91     0.18    0.51    4.37
  5     BRTE     1.80  9.00E-02  2.06E+00    5
   ANN FORBS     0.50   0.02                 5      0.05     0.01    0.10    0.24
  4     PLPA     0.50  2.50E-02  5.71E-01    5
      TOTAL             8.54     100.00            4.7870E+01                2.2986E+02

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE

 PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

  ARTR                                    91.24
  CELA                                     1.34
  OPPO                                    16.42
  PHHO                                    36.33
                   SHRUB PRODUCTION      145.36
                              TOTAL      375.19

 PRECIPITATION DATA
  RAIN GUAGE NO.          BUFFAL CREEK   EXCL    JULY    27/76
 OCT. 15 TO APR. 15 =     E4.00
 APR. 15 TO JULY 1  =     E5.00
 JULY 1 TO SEPT. 1  =      2.57
 SEPT. 1 TO OCT. 15 =      2.70
 SEASON TOTAL       =    E14.27
 LONG TERM AVERAGE  =    E10.68

                                                       UTILIZATION   42.81
                                              PRODUCTION ADJUSTED  418.00
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```
20 23    NOV 03   RUNC4DA...
           2003    BURNED WAGON   EXCL    JULY    7/76    INSIDE NATIVE

                             NUMBER OF PLOTS
                     COVER = 200, PRODUCTION = 20
                      PLOT SIZE 1 FT. X 10 FT.
PLANT   PLANT   TOTAL   AVE.    PERCENT   ABS.     TOTAL   AVE.     WGT./   LBS
CODE    NAME    TRANS   PER-    COMPO-    PLOT     WGT.    WGT.     UNIT    PER
                BASAL   CENT    SITION    FREQ.    GMS/    /PLOT    BASAL   AC.
                AREA    BASAL             BASE     200     OCCUR-   AREA
                PER-    AREA              200      SQ.FT.  RENCES
                CENT

  1   ATGA     1831.4   9.16E+00 9.75E+01103    537.64     5.22   0.29   2.5816E+02
   PER GRASS     11.7   5.85E-02            18      6.76     0.38   0.58   3.2459E+00
  3   SIHY       11.7   5.85E-02 6.23E-01  18      6.76     0.38   0.58   3.2459E+00
   PER FORBS    36.10    0.18              99     66.75     0.67   1.85   32.05
  2   ALTE        7.7   3.85E-02 4.10E-01  54
  2   CYMO       24.1   1.20E-01 1.28E+00  99
  2   MACA        4.3   2.15E-02 2.29E-01  18
      TOTAL             9.4      100.00         6.11150E+02              2.93455E+02

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

 NO SHRUB PRODUCTION OBSERVED


PRECIPITATION DATA
 RAIN GUAGE NO.         BURNED WAGON   EXCL    JULY    7/76
OCT. 15 TO APR. 15 =     2.00
APR. 15 TO JULY 1  =     2.72
JULY 1 TO SEPT. 1  =     0.78
SEPT. 1 TO OCT. 15 =     1.12
SEASON TOTAL       =     6.62
LONG TERM AVERAGE  =     6.12

 ** NO UTILIZATION
```

```
              2003   BURNED WAGON  EXCL    JULY     7/76  CUT     NATIVE

                              NUMBER OF PLOTS
                       COVER = 200, PRODUCTICN = 20
                         PLOT SIZE 1 FT. X 10 FT.
PLANT  PLANT  TOTAL  AVE.    PERCENT  ABS.    TOTAL   AVE.    WGT./  LBS
CODE   NAME   TRANS  PER-    COMPO-   PLOT    WGT.    WGT.    UNIT   PER
              BASAL  CENT    SITION   FREQ.   GMS/    /PLOT   BASAL  AC.
              AREA   BASAL            BASE    200     OCCUR-  AREA
              PER-   AREA             200     SQ.FT.  RENCES
              CENT

  1  ATGA    1305.5  6.53E+00 9.61E+01120     480.33    4.00  0.37  2.3064E+02
   PER GRASS  12.7   6.35E-02               8   10.14    1.27  0.80  4.8689E+00
  3  AGSM      0.2   T         1.47E-02   2     0.06    0.03  0.30  2.8810E-02
  3  POSE      0.8   T         5.89E-02   1     0.17    0.17  0.21  8.1629E-02
  3  SIHY     11.7   5.85E-02 8.61E-01    8     9.91    1.24  0.85  4.7585E+00
   PER FORBS  39.90  0.20                  69   179.46    2.60  4.50  86.17
  2  ALTE      0.9   T         6.63E-02   9
  2  CYMO     16.0   8.00E-02 1.18E+00   69
  2  MACA     23.0   1.15E-01 1.69E+00   68
   ANN FORBS   0.10  0.00                   1     0.70    0.70  7.00   0.34
  4  DEPI      0.1   T         T          1
     TOTAL           6.8      100.00          6.70630E+02              3.22016E+02

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

 NO SHRUB PRODUCTION OBSERVED


PRECIPITATION DATA
 RAIN GUAGE NO.         BURNED WAGON  EXCL    JULY     7/76
OCT. 15 TO APR. 15 =     2.00
APR. 15 TO JULY 1  =     2.72
JULY 1 TO SEPT. 1  =     0.78
SEPT. 1 TO OCT. 15 =     1.12
SEASON TOTAL       =     6.62
LONG TERM AVERAGE  =     6.12


 ** NO UTILIZATION
```

```
          1501   COCHRA EXCL          JULY   27/76  INSIDE NATIVE

                             NUMBER PLOTS = 20
                               PLOT SIZE 1X1
PLANT  PLANT   TOTAL  AVE.    PERCENT  ABS.   TOTAL   AVE.    WGT./  LBS
CODE   NAME    TRANS  PER-    COMPO-   PLOT   WGT.    WGT.    UNIT   PER
               BASAL  CENT    SITICN   FREQ.  GMS/20  /PLOT   BASAL  AC.
               AREA   BASAL            BASE   SQ.FT.  OCCUR-  AREA
               PER-   AREA             20             RENCES
               CENT

  6   *ARTR   339.00 1.69E+01           11
  6   *OPPO     1.00 5.00E-02            1
  6   *PHHO     6.00 3.00E-01            2
  PER GRASS    56.40  2.82              17     26.41    1.55   0.47 126.81
  3   AGSM      9.90 4.95E-01 1.16E+01  13     13.65    1.05   1.38  6.5543E+01
  3   POSE     46.50 2.32E+00 5.47E+01  17     12.76    0.75   0.27  6.1270E+01
  ANN GRASS    28.60  1.43              17     15.53    0.91   0.54  74.57
  5   BRTB     28.60 1.43E+00 3.36E+01  17
    TOTAL            21.55   100.00          4.1940E+01                2.0138E+02

      * NOT COMPUTED IN PERCENT COMPOSITION
      T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS
```

ARTR		251.95
~~PHHO~~		~~39.04~~
OPPO		2.54
	SHRUB PRODUCTION	292.58
	TOTAL	493.96

```
PRECIPITATION DATA
 RAIN GUAGE NO.        COCHRA EXCL          JULY   27/76
OCT. 15 TO APR. 15 =    3.15
APR. 15 TO JULY 1  =    4.72
JULY 1 TO SEPT. 1  =    1.41
SEPT. 1 TO OCT. 15 =    1.75
SEASON TOTAL       =   11.03
LONG TERM AVERAGE  =   10.20
```

** NO UTILIZATION

```
        1501   COCHRA EXCL          JULY   27/76  INSIDE PITTED

                          NUMBER PLOTS = 20
                            PLOT SIZE 1X1
PLANT  PLANT  TOTAL  AVE.   PERCENT  ABS.   TOTAL  AVE.   WGT./  LBS
CODE   NAME   TRANS  PER-   COMPO-   PLOT   WGT.   WGT.   UNIT   PER
              BASAL  CENT   SITION   FREQ.  GMS/20 /PLOT  BASAL  AC.
              AREA   BASAL           BASE   SQ.FT. OCCUR- AREA
              PER-   AREA            20            RENCES
              CENT

  6   *ARTR   222.00 1.11E+01          11
  6   *OPPO     8.00 4.00E-01           2
  6   *PHHO     8.80 4.40E-01           4
   PER GRASS   37.60  1.88             15    24.40   1.63  0.65 117.16
  3   AGSM     12.10 6.05E-01 1.40E+01 15    17.66   1.18  1.46  8.4798E+01
  3   POSE     25.50 1.27E+00 2.96E+01 11     6.74   0.61  0.26  3.2363E+01
   PER FORBS    0.20  0.01              1     0.30   0.30  1.50   1.44
  2   SPCO      0.20 T        2.32E-01  1
   ANN GRASS   47.70  2.38             15    26.16   1.74  0.55 125.61
  5   BRTE     47.70 2.38E+00 5.53E+01 15
   ANN FORBS    0.70  0.03              3     3.03   1.01  4.33  14.55
  4   PLPA      0.70 3.50E-02 8.12E-01  3
    TOTAL           16.25    100.00        5.3890E+01            2.5876E+02

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

 ARTR                                                          157.57
 OPPO                                                           11.76
 PHHO                                                            1.11
                                          SHRUB PRODUCTION     170.44
                                                     TOTAL     429.20

PRECIPITATION DATA
 RAIN GUAGE NO.        COCHRA EXCL          JULY   27/76
OCT. 15 TO APR. 15 =     3.15
APR. 15 TO JULY 1  =     4.72
JULY 1 TO SEPT. 1  =     1.41
SEPT. 1 TO OCT. 15 =     1.75
SEASON TOTAL       =    11.03
LONG TERM AVERAGE  =    10.20

 ** NO UTILIZATION
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```
          1501   COCHRA EXCL            JULY   27/76  OUT    NATIVE

                            NUMBER PLOTS = 20
                              PLOT SIZE 1X1
  PLANT  PLANT   TOTAL  AVE.    PERCENT  ABS.   TOTAL   AVE.   WGT./  LBS
  CODE   NAME    TRANS  PER-    COMPO-   PLOT   WGT.    WGT.   UNIT   PER
                 BASAL  CENT    SITION   FREQ.  GMS/20  /PLOT  BASAL  AC.
                 AREA   BASAL            BASE   SQ.FT.  OCCUR- AREA
                 PER-   AREA             20             RENCES
                 CENT

   6   *ARTR   139.00 6.95E+00            10
   6   *PHHO     6.00 3.00E-01             2
    PER GRASS   84.40  4.22               20    36.65    1.83  0.43 175.98
   3   AGSM     34.20 1.71E+00 3.04E+01   20    23.20    1.16  0.68  1.1140E+02
   3   POSE     50.20 2.51E+00 4.46E+01   19    13.45    0.71  0.27  6.4583E+01
    ANN GRASS   24.70  1.23               18    19.97    1.11  0.81  95.89
   5   BRTE     24.70 1.23E+00 2.20E+01   18
    ANN FORBS    3.40  0.17              . 5     0.10    0.02  0.03   0.48
   4   PLPA      3.40 1.70E-01 3.02E+00    5
      TOTAL            12.87    100.00         5.6720E+01             2.7235E+02

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE

 PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

 ARTR                                                         104.51
 OPPO                                                           2.22
 PHHO                                                          11.25
                                          SHRUB PRODUCTION    117.98

                                                    TOTAL     390.33
 PRECIPITATION DATA
  RAIN GUAGE NO.          COCHRA EXCL         JULY   27/76
 OCT. 15 TO APR. 15 =       3.15
 APR. 15 TO JULY 1  =       4.72
 JULY 1 TO SEPT. 1  =       1.41
 SEPT. 1 TO OCT. 15 =       1.75
 SEASON TOTAL       =      11.03
 LONG TERM AVERAGE  =      10.20


                                              UTILIZATION   27.85
                                      PRODUCTION ADJUSTED  418.18
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              1501   COCHRA EXCL          JULY   27/76  CUT    SPRAY

                           NUMBER PLOTS = 20
                             PLOT SIZE 1X1
 PLANT  PLANT  TOTAL  AVE.   PERCENT  ABS.  TOTAL   AVE.    WGT./  LBS
 CODE   NAME   TRANS  PER-   COMPO-   PLOT  WGT.    WGT.    UNIT   PER
               BASAL  CENT   SITION   FREQ. GMS/20  /PLOT   BASAL  AC.
               AREA   BASAL           BASE  SQ.FT.  OCCUR-  AREA
               PER-   AREA            20            RENCES
               CENT

   PER GRASS   43.10  2.15            20     63.58    3.18  1.48 305.29
  3   AGSM     30.90 1.54E+00 2.65E+01 20    55.35    2.77  1.79  2.6577E+02
  3   BOGR      1.00 5.00E-02 8.56E-01  1     0.49    0.49  0.49  2.3528E+00
  3   POSE     11.20 5.60E-01 9.59E+00 10     7.74    0.77  0.69  3.7165E+01
   ANN GRASS   73.20  3.66            20     75.12    3.76  1.03 360.70
  5   BRTE     73.20 3.66E+00 6.27E+01 20
   ANN FORBS    0.50  0.02             2      0.04    0.02  0.08   0.19
  4   PLPA      0.50 2.50E-02 4.28E-01  2
     TOTAL           5.84   100.00          1.3874E+02            6.6619E+02

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE

 PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

  ARTR                                                     11.89
  OPPO                                                      6.56
  PHHO                                                      1.30
 PRECIPITATION DATA                     SHRUB PRODUCTION   19.75
                                                  TOTAL   705.69
  RAIN GUAGE NO.        COCHRA EXCL           JULY   27/76
 OCT. 15 TO APR. 15 =    3.15
 APR. 15 TO JULY 1  =    4.72
 JULY 1 TO SEPT. 1  =    1.41
 SEPT. 1 TO OCT. 15 =    1.75
 SEASON TOTAL       =   11.03
 LONG TERM AVERAGE  =   10.20

                                                  UTILIZATION   88.59
                                           PRODUCTION ADJUSTED  794.28
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1901 CUMBER EXCL NO. 1 AUGUST 5/76 INSIDE NATIVE

NUMBER PLOTS = 20
PLOT SIZE 1X1

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER-CENT	AVE. PER-CENT BASAL AREA	PERCENT COMPO-SITION	ABS. PLOT FREQ. BASE 20	TOTAL WGT. GMS/20 SQ.FT.	AVE. WGT. /PLOT OCCUR-RENCES	WGT./ UNIT BASAL AREA	LBS PER AC.
1	ATGA	60.00	3.00E+00	4.38E+01	7	20.28	2.90	0.34	9.7378E+01
6	*ARTR	37.00	1.85E+00		4				
6	*CHVI	7.00	3.50E-01		2				
6	*CELA	3.00	1.50E-01		1				
6	*PHHO	3.00	1.50E-01		1				
6	*SAVE	68.00	3.40E+00		6				
	PER GRASS	76.90	3.84		18	37.90	2.11	0.49	181.98
3	AGSM	38.60	1.93E+00	2.82E+01	18	21.81	1.21	0.57	1.0472E+02
3	POSE	23.30	1.16E+00	1.70E+01	14	8.40	0.60	0.36	4.0334E+01
3	SIHY	15.00	7.50E-01	1.10E+01	5	7.69	1.54	0.51	3.6925E+01
	TOTAL		12.74	100.00		5.8180E+01			2.7936E+02

* NOT COMPUTED IN PERCENT COMPOSITION
T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR	30.99
CELA	3.54
CHVI	15.22
PHHO	2.04
SAVE	25.57
TESP	1.25
SHRUB PRODUCTION	78.61
TOTAL	357.97

PRECIPITATION DATA
RAIN GUAGE NO. CUMBER EXCL NO. 1 AUGUST 5/76
OCT. 15 TO APR. 15 = E2.30
APR. 15 TO JULY 1 = 2.57
JULY 1 TO SEPT. 1 = ND
SEPT. 1 TO OCT. 15 = ND
SEASON TOTAL = ---
LONG TERM AVERAGE = 8.29

** NO UTILIZATION

1901 CUMBER EXCL NO. 1 AUGUST 5/76 OUT NATIVE

NUMBER PLOTS = 20
PLOT SIZE 1X1

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER-CENT	AVE. PER-CENT BASAL AREA	PERCENT COMPO-SITION	ABS. PLOT FREQ. BASE 20	TOTAL WGT. GMS/20 SQ.FT.	AVE. WGT. /PLOT OCCUR-RENCES	WGT./ UNIT BASAL AREA	LBS PER AC.
1	ATGA	63.40	3.17E+00	7.26E+01	10	16.71	1.67	0.26	8.0236E+01
6	*ARTR	54.00	2.70E+00		4				
6	*CHVI	6.20	3.10E-01		3				
6	*SAVE	43.00	2.15E+00		3				
	PER GRASS	23.90	1.19		12	8.02	0.67	0.34	38.51
3	AGSM	14.10	7.05E-01	1.62E+01	12	4.56	0.38	0.32	2.1896E+01
3	ORHY	2.60	1.30E-01	2.98E+00	3	1.40	0.47	0.54	6.7224E+00
3	POSE	4.70	2.35E-01	5.38E+00	6	0.17	0.03	0.04	8.1629E-01
3	SIHY	2.50	1.25E-01	2.86E+00	3	1.89	0.63	0.76	9.0752E+00
	TOTAL		9.52	100.00		2.4730E+01			1.1875E+02

* NOT COMPUTED IN PERCENT COMPOSITION
T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR	99.42
CELA	1.77
CHVI	38.50
PHHO	2.26
SAVE	16.68
TESP	7.49
SHRUB PRODUCTION	166.12
TOTAL	284.87

PRECIPITATION DATA
RAIN GUAGE NO. CUMBER EXCL NO. 1 AUGUST 5/76
OCT. 15 TO APR. 15 = E2.30
APR. 15 TO JULY 1 = 2.57
JULY 1 TO SEPT. 1 = ND
SEPT. 1 TO OCT. 15 = ND
SEASON TOTAL = ---
LONG TERM AVERAGE = 8.29

UTILIZATION	37.68
PRODUCTION ADJUSTED	322.55

1901 CUMBER EXCL NO. 1 AUGUST 5/76 INSIDE SPRAY

NUMBER PLOTS = 20
PLOT SIZE 1X1

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER-CENT	AVE. PER-CENT BASAL AREA	PERCENT COMPO-SITION	ABS. PLOT FREQ. BASE 20	TOTAL WGT. GMS/20 SQ.FT.	AVE. WGT. /PLOT OCCUR-RENCES	WGT./ UNIT BASAL AREA	LBS PER AC.
1	ATGA	59.00	2.95E+00	3.13E+01	2	27.77	13.88	0.47	1.3334E+02
6	*CHVI	26.30	1.31E+00		7				
6	*PHHO	2.00	1.00E-01		1				
PER GRASS		129.70	6.48		20	54.15	2.71	0.42	260.01
3	AGSM	93.50	4.67E+00	4.95E+01	20	45.74	2.29	0.49	2.1963E+02
3	POSE	35.20	1.76E+00	1.87E+01	11	7.90	0.72	0.22	3.7933E+01
3	SIHY	1.00	5.00E-02	5.30E-01	1	0.51	0.51	0.51	2.4489E+00
TOTAL			10.85	100.00		8.1920E+01			3.9335E+02

* NOT COMPUTED IN PERCENT COMPOSITION
T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR	10.33
ATCO	11.20
CHVI	25.16
PHHO	0.97
SHRUB PRODUCTION	47.66
TOTAL	441.01

PRECIPITATION DATA
RAIN GUAGE NO. CUMBER EXCL NO. 1 AUGUST 5/76
OCT. 15 TO APR. 15 = E2.30
APR. 15 TO JULY 1 = 2.57
JULY 1 TO SEPT. 1 = ND
SEPT. 1 TO OCT. 15 = ND
SEASON TOTAL = ---
LONG TERM AVERAGE = 8.29

** NO UTILIZATION

```
              1901   CUMBER EXCL   NO. 1  AUGUST  5/76  OUT    SPRAY

                               NUMBER PLOTS = 20
                                 PLOT SIZE 1X1
PLANT  PLANT  TOTAL  AVE.   PERCENT  ABS.   TOTAL   AVE.   WGT./  LBS
CODE   NAME   TRANS  PER-   COMPO-   PLOT   WGT.    WGT.   UNIT   PER
              BASAL  CENT   SITION   FREQ.  GMS/20  /PLOT  BASAL  AC.
              AREA   BASAL           BASE   SQ.FT.  OCCUR- AREA
              PER-   AREA            20             RENCES
              CENT

  1    ATGA    16.00 8.00E-01 1.68E+01  2     0.69    0.34  0.04  3.3132E+00
  6    *CHVI    3.70 1.85E-01           3
   PER GRASS   79.10  3.95             20    17.89    0.89  0.23  85.90
  3    AGSM    72.40 3.62E+00 7.61E+01 20    17.35    0.87  0.24  8.3309E+01
  3    POSE     6.70 3.35E-01 7.05E+00  7     0.54    0.08  0.08  2.5929E+00
     TOTAL           4.94   100.00          1.8580E+01             8.9215E+01

       * NOT COMPUTED IN PERCENT COMPOSITION
       T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

 ARTR                                                        2.58
 CHDO                                                        3.48
 CHVI                                                       16.77
 PHHO                                                        0.11
 SAVE                                                       21.12
PRECIPITATION DATA                             SHRUB PRODUCTION  44.06
 RAIN GUAGE NO.        CUMBER EXCL    NO. 1  AUGUST   5/76TOTAL 133.27
OCT. 15 TO APR. 15 =     E2.30
APR. 15 TO JULY 1  =      2.57
JULY 1 TO SEPT. 1  =      ND
SEPT. 1 TO OCT. 15 =      ND
SEASON TOTAL       =      ---
LONG TERM AVERAGE  =      8.29



                                                      UTILIZATION   103.21
                                              PRODUCTION ADJUSTED   236.48
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1201   CUMBER EXCL   NO.2   AUGUST  5/76  INSIDE NATIVE

                          NUMBER PLOTS = 20
                            PLOT SIZE 1X1
PLANT  PLANT   TOTAL   AVE.     PERCENT   ABS.   TOTAL   AVE.    WGT./  LBS
CODE   NAME    TRANS   PER-     COMPO-    PLOT   WGT.    WGT.    UNIT   PER
               BASAL   CENT     SITION    FREQ.  GMS/20  /PLOT   BASAL  AC.
               AREA    BASAL              BASE   SQ.FT.  OCCUR-  AREA
               PER-    AREA               20             RENCES
               CENT

  6    *ARLO    45.00 2.25E+00              4
  6    *CHVI    17.20 8.60E-01              7
  6    *ERMI    13.00 6.50E-01              5
   PER GRASS   101.70  5.08                18     72.19   4.01   0.71 346.63
  3    AGSM     24.00 1.20E+00 1.58E+01 18     30.17   1.68   1.26  1.4487E+02
  3    KOCR      0.10 T        6.60E-02  1      0.49   0.49   4.90  2.3528E+00
  3    POFE     51.80 2.59E+00 3.42E+01 14     31.09   2.22   0.60  1.4928E+02
  3    POSE     25.80 1.29E+00 1.70E+01  7     10.44   1.49   0.40  5.0130E+01
   PER FORBS    49.90  2.49                17     16.29   0.96   0.33  78.22
  2    ASDI      0.20 T        1.32E-01  1
  2    CAS       3.10 1.55E-01 2.04E+00  4
  2    COPA      6.60 3.30E-01 4.35E+00 13
  2    CYMO      0.40 2.00E-02 2.64E-01  2
  2    ERSU     18.00 9.00E-01 1.19E+01  5
  2    PEN       0.90 4.50E-02 5.94E-01  3
  2    PHLO      5.60 2.80E-01 3.69E+00  8
  2    PHMU      9.00 4.50E-01 5.94E+00  2
  2    SECA      2.20 1.10E-01 1.45E+00  4
  2    TRI       3.90 1.95E-01 2.57E+00 17
     TOTAL           11.34    100.00         8.8480E+01            4.2485E+02

         * NOT COMPUTED IN PERCENT COMPOSITION
         T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS
 ARLO                                                        92.50
 CHVI                                                        69.91
 ERMI                                                        25.86
 ERSU                                                        16.92
 LEPU                                                         9.73
 PHHO                                                        15.71
 TECA                                                         5.71
                                       SHRUB PRODUCTION     236.34
PRECIPITATION DATA                                TOTAL     661.19
 RAIN GUAGE NO.        CUMBER EXCL    NO.2   AUGUST  5/76
OCT. 15 TO APR. 15 =    E2.25
APR. 15 TO JULY 1  =     3.13
JULY 1 TO SEPT. 1  =     ND
SEPT. 1 TO OCT. 15 =     ND
SEASON TOTAL       =     ---
LONG TERM AVERAGE  =     9.60

 ** NO UTILIZATION
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1201 CUMBER EXCL NO.2 AUGUST 5/76 OUT NATIVE

NUMBER PLOTS = 20
PLOT SIZE 1X1

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER-CENT	AVE. PER-CENT BASAL AREA	PERCENT COMPO-SITION	ABS. PLOT FREQ. BASE 20	TOTAL WGT. GMS/20 SQ.FT.	AVE. WGT. /PLOT OCCUR-RENCES	WGT./ UNIT BASAL AREA	LBS PER AC.
6	*ARLO	386.20	1.93E+01		18				
6	*CHVI	15.00	7.50E-01		5				
6	*ERMI	23.00	1.15E+00		10				
6	*LEPU	4.00	2.00E-01		2				
6	*PHHO	7.20	3.60E-01		4				
6	*TECA	2.00	1.00E-01		1				
	PER GRASS	42.70	2.13		19	16.34	0.86	0.38	78.46
3	AGSM	26.10	1.30E+00	3.83E+01	19	12.56	0.66	0.48	6.0309E+01
3	POFE	11.60	5.80E-01	1.70E+01	8	3.33	0.42	0.29	1.5990E+01
3	POSE	5.00	2.50E-01	7.33E+00	4	0.45	0.11	0.09	2.1608E+00
	PER FORBS	23.60	1.18		13	5.40	0.42	0.23	25.93
2	ANDI	5.00	2.50E-01	7.33E+00	3				
2	ARHO2	0.20	T	2.93E-01	1				
2	ASMI	2.00	1.00E-01	2.93E+00	2				
2	ASPU	1.00	5.00E-02	1.47E+00	1				
2	CAS	5.00	2.50E-01	7.33E+00	8				
2	CYMO	0.40	2.00E-02	5.87E-01	1				
2	PHLO	6.60	3.30E-01	9.68E+00	13				
2	PHMU	1.00	5.00E-02	1.47E+00	1				
2	SECA	0.40	2.00E-02	5.87E-01	1				
2	TRI	2.00	1.00E-01	2.93E+00	9				
	ANN FORBS	1.90	0.09		6	0.84	0.14	0.44	4.03
4	CORA	1.90	9.50E-02	2.79E+00	6				
	TOTAL		25.28	100.00		2.2580E+01			1.0842E+02

* NOT COMPUTED IN PERCENT COMPOSITION
T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARLO	96.74.
CHVI	79.90
ERMI	25.46
ERSU	9.06
LEPU	14.30
PHHO	9.06
TECA	4.75
SHRUB PRODUCTION	239.27
TOTAL	347.69

PRECIPITATION DATA

RAIN GUAGE NO.	CUMBER EXCL NO.2 AUGUST 5/76
OCT. 15 TO APR. 15 =	E2.25
APR. 15 TO JULY 1 =	3.13
JULY 1 TO SEPT. 1 =	ND
SEPT. 1 TO OCT. 15 =	ND
SEASON TOTAL =	---
LONG TERM AVERAGE =	9.60

UTILIZATION	69.60
PRODUCTION ADJUSTED	417.29

```
        1201   CUMBER EXCL   NO.2   AUGUST  5/76  INSIDE SPRAY

                          NUMBER PLOTS = 20
                            PLOT SIZE 1X1
PLANT  PLANT    TOTAL  AVE.     PERCENT   ABS.   TOTAL   AVE.   WGT./   LBS
CODE   NAME     TRANS  PER-     COMPO-    PLOT   WGT.    WGT.   UNIT    PER
                BASAL  CENT     SITION    FREQ.  GMS/20  /PLOT  BASAL   AC.
                AREA   BASAL              BASE   SQ.FT.  OCCUR- AREA
                PER-   AREA               20             RENCES
                CENT

 6   *ERMI        3.00 1.50E-01            2
  PER GRASS     220.70 11.03              20    118.59    5.93  0.54 569.43
 3    AGSM       63.70 3.18E+00 2.74E+01  20     44.35    2.22  0.70  2.1296E+02
 3    POFB      153.00 7.65E+00 6.58E+01  19     72.98    3.84  0.48  3.5043E+02
 3    POSE        4.00 2.00E-01 1.72E+00   3      1.26    0.42  0.31  6.0501E+00
  PER FORBS      11.80  0.59              10      7.10    0.71  0.60  34.09
 2    ASDI        0.30 1.50E-02 1.29E-01   1
 2    COPA        1.00 5.00E-02 4.30E-01   1
 2    LILE        5.70 2.85E-01 2.45E+00   4
 2    PHLO        1.80 9.00E-02 7.74E-01   6
 2    TRI         3.00 1.50E-01 1.29E+00  10
  ANN FORBS       0.10  0.00               1      0.19    0.19  1.90   0.91
 4    DEPI        0.10 T        4.30E-02   1
    TOTAL             11.78   100.00            1.2588E+02            6.0444E+02

         * NOT COMPUTED IN PERCENT COMPOSITION
         T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS
  CHVI                                                           25.80
  ERMI                                                            3.89
  ERSU                                                            1.64
  LEPU                                                            2.29
  PHHO                                                            3.14
  TECA                                                            4.76
                                             SHRUB PRODUCTION    41.52
PRECIPITATION DATA
  RAIN GUAGE NO.        CUMBER EXCL    NO.2    AUGUST   5/76TOTAL 645.96
OCT. 15 TO APR. 15 =     E2.25
APR. 15 TO JULY 1  =      3.13
JULY 1 TO SEPT. 1  =     ND
SEPT. 1 TO OCT. 15 =     ND
SEASON TOTAL       =     ---
LONG TERM AVERAGE  =      9.60

  ** NO UTILIZATION
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          1201   CUMBER EXCL   NO.2   AUGUST  5/76  OUT    SPRAY

                              NUMBER PLOTS = 20
                                PLOT SIZE 1X1
 PLANT  PLANT  TOTAL  AVE.   PERCENT  ABS.   TOTAL  AVE.   WGT./  LBS
 CODE   NAME   TRANS  PER-   COMPO-   PLOT   WGT.   WGT.   UNIT   PER
               BASAL  CENT   SITION   FREQ.  GMS/20 /PLOT  BASAL  AC.
               AREA   BASAL           BASE   SQ.FT. OCCUR- AREA
               PER-   AREA            20            RENCES
               CENT

   6   *ARLO    2.00 1.00E-01            1
   6   *CHVI    2.00 1.00E-01            2
   6   *ERMI    1.00 5.00E-02            1
  PER GRASS    72.50  3.62              20    13.71   0.69  0.19  65.83
   3   AGSM    40.00 2.00E+00 4.44E+01  20    10.01   0.50  0.25  4.8065E+01
   3   POFE     7.10 3.55E-01 7.89E+00   6     1.37   0.23  0.19  6.5783E+00
   3   POSE    25.40 1.27E+00 2.82E+01  13     2.33   0.18  0.09  1.1188E+01
  PER FORBS    17.30  0.86              17     1.61   0.09  0.09   7.73
   2   ASDI     0.20 T        2.22E-01   1
   2   ASMI     3.50 1.75E-01 3.89E+00   2
   2   LILB     0.60 3.00E-02 6.67E-01   2
   2   PHLO    10.90 5.45E-01 1.21E+01  17
   2   SECA     0.70 3.50E-02 7.78E-01   2
   2   TRI      1.40 7.00E-02 1.56E+00   7
  ANN FORBS     0.20  0.01               1     0.02   0.02  0.10   0.10
   4   DEPI     0.20 T        2.22E-01   1
    TOTAL            4.75    100.00          1.5340E+01         7.3658E+01

      * NOT COMPUTED IN PERCENT COMPOSITION
      T - TRACE

 PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS
 ARLO                                                     8.84
 CHVI                                                    17.34
 ERMI                                                     4.05
 PHHO                                                     3.85
 TECA                                                     9.91
                                      SHRUB PRODUCTION   43.99

                                           TOTAL        117.64

 PRECIPITATION DATA
  RAIN GUAGE NO.        CUMBER EXCL   NO.2   AUGUST  5/76
 OCT. 15 TO APR. 15 =   E2.25
 APR. 15 TO JULY 1  =    3.13
 JULY 1 TO SEPT. 1  =    ND
 SEPT. 1 TO OCT. 15 =    ND
 SEASON TOTAL       =    --
 LONG TERM AVERAGE  =    9.60

                                          UTILIZATION    57.23
                                  PRODUCTION ADJUSTED   174.87
```

1202 CUMBER EXCL NO.3 AUG 4/76 INSIDE NATIVE

NUMBER PLOTS = 20
PLOT SIZE 1X1

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER-CENT	AVE. PER-CENT BASAL AREA	PERCENT COMPO-SITION	ABS. PLOT FREQ. BASE 20	TOTAL WGT. GMS/20 SQ.FT.	AVE. WGT. /PLOT OCCUR-RENCES	WGT./ UNIT BASAL AREA	LBS PER AC.
6	*ANDI	10.00	5.00E-01		5				
6	*ARTR	387.00	1.93E+01		11				
6	*CHVI	15.00	7.50E-01		6				
6	*ERMI	1.00	5.00E-02		1				
6	*PHHO	45.00	2.25E+00		9				
PER GRASS		58.90	2.94		13	33.76	2.60	0.57	162.11
3	AGSM	14.70	7.35E-01	2.00E+01	13	14.04	1.08	0.96	6.7416E+01
3	AGSP	24.00	1.20E+00	3.27E+01	7	10.83	1.55	0.45	5.2002E+01
3	PUFE	11.00	5.50E-01	1.50E+01	3	7.48	2.49	0.68	3.5917E+01
3	POSE	8.00	4.00E-01	1.09E+01	5	1.26	0.25	0.16	6.0501E+00
3	SIHY	1.20	6.00E-02	1.63E+00	2	0.15	0.07	0.12	7.2025E-01
PER FORBS		10.50	0.52		8	6.83	0.85	0.65	32.80
2	ASDI	1.20	6.00E-02	1.63E+00	2				
2	ASMI	4.00	2.00E-01	5.44E+00	2				
2	CAS	1.00	5.00E-02	1.36E+00	1				
2	COPA	1.00	5.00E-02	1.36E+00	1				
2	TRI	3.30	1.65E-01	4.49E+00	8				
ANN FORBS		4.10	0.20		4	4.98	1.24	1.21	23.91
4	CORA	4.10	2.05E-01	5.58E+00	4				
	TOTAL		26.57	100.00		4.5570E+01			2.1881E+02

* NOT COMPUTED IN PERCENT COMPOSITION
T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR	210.03
CHVI	36.77
ERMI	17.96
PHHO	47.28
TECA	1.47
SHRUB PRODUCTION	313.51
TOTAL	352.32

PRECIPITATION DATA
RAIN GUAGE NO. CUMBER EXCL NO.3 AUG 4/76
OCT. 15 TO APR. 15 = E4.35
APR. 15 TO JULY 1 = 2.91
JULY 1 TO SEPT. 1 = ND
SEPT. 1 TO OCT. 15 = ND
SEASON TOTAL = --
LONG TERM AVERAGE = 11.27

** NO UTILIZATION

```
        1202   CUMBER EXCL   NO.3   AUG     4/76  OUT    NATIVE

                          NUMBER PLOTS = 20
                            PLOT SIZE 1X1
 PLANT  PLANT  TOTAL  AVE.   PERCENT  ABS.   TOTAL  AVE.   WGT./  LBS
 CODE   NAME   TRANS  PER-   COMPO-   PLOT   WGT.   WGT.   UNIT   PER
               BASAL  CENT   SITION   FREQ.  GMS/20 /PLOT  BASAL  AC.
               AREA   BASAL           BASE   SQ.FT. OCCUR- AREA
               PER-   AREA            20            RENCES
               CENT

  6    *ANDI   15.00 7.50E-01            4
  6    *ARTR  371.30 1.86E+01           14
  6    *CHVI   16.00 8.00E-01           10
  6    *PHHO   67.30 3.36E+00           10
   PER GRASS   56.30  2.81              19    29.62    1.56  0.53 142.23
  3    AGSM    28.10 1.40E+00 4.11E+01  19    19.14    1.01  0.68  9.1904E+01
  3    AGSP    14.00 7.00E-01 2.05E+01   4     5.98    1.49  0.43  2.8714E+01
  3    POSE     7.20 3.60E-01 1.05E+01   7     1.09    0.16  0.15  5.2338E+00
  3    STCO     7.00 3.50E-01 1.02E+01   5     3.41    0.68  0.49  1.6374E+01
   PER FORBS    9.70  0.48              11     1.77    0.16  0.18   8.50
  2    ASDI     0.60 3.00E-02 8.77E-01   2
  2    ASMI     3.00 1.50E-01 4.39E+00   2
  2    TRI      6.10 3.05E-01 8.92E+00  11
   ANN FORBS    2.40  0.12               7     3.70    0.53  1.54  17.77
  4    CORA     2.40 1.20E-01 3.51E+00   7
     TOTAL           26.90    100.00        3.5090E+01              1.6849E+02

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE

 PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS
 ARTR                                                          382.48
 CHVI                                                           16.41
 ERMI                                                           37.65
 PHHO                                                           16.17
 TECA                                                            3.43
                                         SHRUB PRODUCTION      456.14

                                                    TOTAL      624.43


 PRECIPITATION DATA
  RAIN GUAGE NO.         CUMBER EXCL   NO.3   AUG     4/76
 OCT. 15 TO APR. 15 =   E4.35
 APR. 15 TO JULY 1  =    2.91
 JULY 1 TO SEPT. 1  =    ND
 SEPT. 1 TO OCT. 15 =    ND
 SEASON TOTAL       =    --
 LONG TERM AVERAGE  =  11.27

                                             UTILIZATION    56.32
                                     PRODUCTION ADJUSTED   680.75
```

1202 CUMBER EXCL NO.3 AUG 4/76 INSIDE SPRAY

NUMBER PLOTS = 20
PLOT SIZE 1X1

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER-CENT	AVE. PER-CENT BASAL AREA	PERCENT COMPC-SITION	ABS. PLOT FREQ. BASE 20	TOTAL WGT. GMS/20 SQ.FT.	AVE. WGT. /PLOT OCCUR-RENCES	WGT./ UNIT BASAL AREA	LBS PER AC.
6	*CHVI	11.00	5.50E-01		5				
6	*ERMI	12.00	6.00E-01		5				
6	*PHHO	7.00	3.50E-01		3				
	PER GRASS	195.50	9.77		17	116.30	6.84	0.59	558.44
3	AGSM	10.50	5.25E-01	5.32E+00	4	9.13	2.28	0.87	4.3839E+01
3	AGSP	144.00	7.20E+00	7.30E+01	17	78.53	4.62	0.55	3.7708E+02
3	POFE	34.00	1.70E+00	1.72E+01	6	26.74	4.46	0.79	1.2840E+02
3	POSE	7.00	3.50E-01	3.55E+00	6	1.90	0.32	0.27	9.1232E+00
	PER FORBS	1.70	0.08		6	0.38	0.06	0.22	1.82
2	TRI	1.70	8.50E-02	8.62E-01	6				
	ANN FORBS	0.10	0.00		1	0.10	0.10	1.00	0.48
4	DEPI	0.10	T	5.07E-02	1				
	TOTAL		11.36	100.00		1.1678E+02			5.6074E+02

* NOT COMPUTED IN PERCENT COMPOSITION
T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR	41.61
CHVI	56.03
ERMI	16.19
PHHO	11.40
TECA	3.43
SHRUB PRODUCTION	128.66
TOTAL	689.40

PRECIPITATION DATA
RAIN GUAGE NO. CUMBER EXCL NO.3 AUG 4/76
OCT. 15 TO APR. 15 = E4.35
APR. 15 TO JULY 1 = 2.91
JULY 1 TO SEPT. 1 = ND
SEPT. 1 TO OCT. 15 = ND
SEASON TOTAL = --
LONG TERM AVERAGE = 11.27

** NO UTILIZATION

```
       1202   CUMBER EXCL    NO.3    AUG       4/76   CUT     SPRAY

                            NUMBER PLOTS = 20
                              PLOT SIZE 1X1
PLANT  PLANT   TOTAL   AVE.    PERCENT   ABS.    TOTAL   AVE.    WGT./   LBS
CODE   NAME    TRANS   PER-    COMPO-    PLOT    WGT.    WGT.    UNIT    PER
               BASAL   CENT    SITION    FREQ.   GMS/20  /PLOT   BASAL   AC.
               AREA    BASAL             BASE    SQ.FT.  OCCUR-  AREA
               PER-    AREA              20              RENCES
               CENT

  6    *ANDI    12.00 6.00E-01              4
  6    *ARTR    78.00 3.90E+00              5
  6    *CHVI     9.00 4.50E-01              5
  6    *ERMI     4.00 2.00E-01              3
  6    *PHHO    28.50 1.42E+00              8
  6    *TECA     2.00 1.00E-01              1
   PER GRASS    88.90  4.44                13      60.07     4.62   0.68  288.44
  3     AGSM    32.70 1.63E+00 3.51E+01    13      18.70     1.44   0.57  8.9792E+01
  3     AGSP    40.40 2.02E+00 4.34E+01    10      32.04     3.20   0.79  1.5385E+02
  3     POFE     4.00 2.00E-01 4.30E+00     2       2.56     1.28   0.64  1.2292E+01
  3     POSE     5.80 2.90E-01 6.23E+00     7       1.43     0.20   0.25  6.8664E+00
  3     STCO     6.00 3.00E-01 6.44E+00     1       5.34     5.34   0.89  2.5641E+01
   PER FORBS     3.40  0.17                 6       1.21     0.20   0.36   5.81
  2     ASDI     1.00 5.00E-02 1.07E+00     1
  2     TRI      2.40 1.20E-01 2.58E+00     6
   ANN FORBS     0.80  0.04                 3       1.06     0.35   1.32   5.09
  4     CORA     0.80 4.00E-02 8.59E-01     3
     TOTAL             11.33    100.00            6.2340E+01                2.9934E+02

          * NOT COMPUTED IN PERCENT COMPOSITION
          T = TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS
ARTR                                                         51.52
CHVI                                                         19.70
ERMI                                                          8.43
PHHO                                                         16.17
TECA                                                          0.98
                                        SHRUB PRODUCTION     96.80
                                                   TOTAL    396.14


PRECIPITATION DATA
 RAIN GUAGE NO.         CUMBER EXCL     NO.3    AUG      4/76
OCT. 15 TO APR. 15  =   E4.35
APR. 15 TO JULY 1   =    2.91
JULY 1 TO SEPT. 1   =    ND
SEPT. 1 TO OCT. 15  =    ND
SEASON TOTAL        =    --
LONG TERM AVERAGE   =   11.27

                                               UTILIZATION    165.33
                                        PRODUCTION ADJUSTED   561.47
```

1902 CUMBER EXCL NO. 4 AUGUST 04/76 INSIDE NATIVE

NUMBER PLOTS = 20
PLOT SIZE 1X1

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER-CENT	AVE. PER-CENT BASAL AREA	PERCENT COMPO-SITION	ABS. PLOT FREQ. BASE 20	TOTAL WGT. GMS/20 SQ.FT.	AVE. WGT. /PLOT OCCUR-RENCES	WGT./ UNIT BASAL AREA	LBS PER AC.
1	ATGA	33.00	1.65E+00	3.37E+01	8	17.39	2.17	0.53	8.3501E+01
6	*ARSP	18.00	9.00E-01		7				
6	*PHHO	7.00	3.50E-01		3				
PER GRASS		65.00	3.25		11	34.49	3.14	0.53	165.61
3	ORHY	5.00	2.50E-01	5.10E+00	1	5.57	5.57	1.11	2.6745E+01
3	SIHY	60.00	3.00E+00	6.12E+01	11	28.92	2.63	0.48	1.3886E+02
	TOTAL		6.15	100.00		5.1880E+01			2.4911E+02

* NOT COMPUTED IN PERCENT COMPOSITION
T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARSP	6.97
PHHO	2.22
TESP	0.60
SHRUB PRODUCTION	9.79
TOTAL	258.90

PRECIPITATION DATA
RAIN GUAGE NO. CUMBER EXCL NO. 4 AUGUST 04/76
OCT. 15 TO APR. 15 = E2.73
APR. 15 TO JULY 1 = 2.48
JULY 1 TO SEPT. 1 = ND
SEPT. 1 TO OCT. 15 = ND
SEASON TOTAL = --
LONG TERM AVERAGE = 8.61

** NO UTILIZATION

```
           1902   CUMBER EXCL    NO.  4 AUGUST 4/76    OUT     NATIVE

                           NUMBER PLOTS = 20
                             PLOT SIZE 1X1
    PLANT   PLANT   TOTAL   AVE.    PERCENT   ABS.    TOTAL   AVE.    WGT./   LBS
    CODE    NAME    TRANS   PER-    COMPO-    PLOT    WGT.    WGT.    UNIT    PER
                    BASAL   CENT    SITION    FREQ.   GMS/20  /PLOT   BASAL   AC.
                    AREA    BASAL             BASE    SQ.FT.  OCCUR-  AREA
                    PER-    AREA              20              RENCES
                    CENT

      1     ATGA    189.00 9.45E+00 8.68E+01 13      52.53    4.04   0.28   2.5223E+02
      6     *ARSP    16.00 8.00E-01           6
      6     *CELA    12.50 6.25E-01           4
       PER GRASS     28.70  1.43             12       9.09    0.76   0.32   43.65
      3     AGSM      1.20 6.00E-02 5.51E-01  2       1.30    0.65   1.08   6.2422E+00
      3     SIHY     27.50 1.38E+00 1.26E+01 12       7.79    0.65   0.28   3.7405E+01
         TOTAL              12.31    100.00        6.1620E+01                2.9588E+02

           * NOT COMPUTED IN PERCENT COMPOSITION
           T - TRACE

    PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

    ARSP                                                        3.41
    CELA                                                        0.30
    PHHO                                                        0.30
    TESP                                                        4.64
                                        SHRUB PRODUCTION        8.65

                                                 TOTAL        304.53

    PRECIPITATION DATA
     RAIN GUAGE NO.          CUMBER EXCL    NO    4 AUGUST 4/76
    OCT. 15 TO APR. 15 =   E2.73
    APR. 15 TO JULY 1  =    2.48
    JULY 1 TO SEPT. 1  =    ND
    SEPT. 1 TO OCT. 15 =    ND
    SEASON TOTAL       =    --
    LONG TERM AVERAGE  =    8.61

                                              UTILIZATION      16.72
                                      PRODUCTION ADJUSTED     321.25
           2004    DEMER   EXCL        .     JULY    20/76   INSIDE NATIVE

                                 NUMBER PLOTS = 20
                                   PLOT SIZE 1X1
 PLANT   PLANT   TOTAL   AVE.    PERCENT  ABS.    TOTAL   AVE.    WGT./   LBS
 CODE    NAME    TRANS   PER-    COMPO-   PLOT    WGT.    WGT.    UNIT    PER
                 BASAL   CENT    SITION   FREQ.   GMS/20  /PLOT   BASAL   AC.
                 AREA    BASAL            BASE    SQ.FT.  OCCUR-  AREA
                 PER-    AREA             20              RENCES
                 CENT

   6    *ARTR   159.00 7.95E+00            7
   PER GRASS     98.60  4.93              17     19.40    1.14   0.20   93.15
   3    AGSM     12.00 6.00E-01 6.85E+00   6      2.30    0.38   0.19   1.1044E+01
   3    AGSP      4.70 2.35E-01 2.68E+00   5      3.97    0.79   0.84   1.9063E+01
   3    BUGR     41.80 2.09E+00 2.39E+01   9      2.49    0.28   0.06   1.1956E+01
   3    POSE     36.10 1.80E+00 2.06E+01  17      7.98    0.47   0.22   3.8318E+01
   3    SIHY      4.00 2.00E-01 2.28E+00   3      2.66    0.89   0.66   1.2773E+01
   ANN GRASS     74.30  3.71               9     15.05    1.67   0.20   72.27
   5    PRTE     71.30 3.56E+00 4.07E+01   9
   5    VUOC      3.00 1.50E-01 1.71E+00   6
   ANN FORBS      2.30  0.11               1      0.18    0.18   0.08    0.86
   4    PLSP      0.10 T        5.71E-02   1
   4    SAKA      2.00 1.00E-01 1.14E+00   1
   4    SILI      0.20 T        1.14E-01   1
     TOTAL              16.71   100.00          3.4630E+01              1.6628E+02

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE

 PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

 ARTR                                                     97.37
 OPPO                                                     22.01
                                       SHRUB PRODUCTION  119.38
                                                 TOTAL   285.66

 PRECIPITATION DATA
  RAIN GUAGE NO.           DEMER   EXCL           JULY    20/76
 OCT. 15 TO APR. 15 =   2.26
 APR. 15 TO JULY 1  =   3.94
 JULY 1 TO SEPT. 1  =   1.21
 SEPT. 1 TO OCT. 15 =   2.22
 SEASON TOTAL       =   9.63
 LONG TERM AVERAGE  =   8.20

 ** NO UTILIZATION
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```
          2004   DEMER  EXCL          JULY   20/76  OUT    NATIVE

                              NUMBER PLOTS = 20
                                PLOT SIZE 1X1
 PLANT  PLANT  TOTAL  AVE.   PERCENT  ABS.   TOTAL  AVE.   WGT./  LBS
 CODE   NAME   TRANS  PER-   COMPO-   PLOT   WGT.   WGT.   UNIT   PER
               BASAL  CENT   SITION   FREQ.  GMS/20 /PLOT  BASAL  AC.
               AREA   BASAL           BASE   SQ.FT. OCCUR- AREA
               PER-   AREA            20            RENCES
               CENT

   6    *ARTR  102.00 5.10E+00           8
   6    *OPPO   42.00 2.10E+00           4
    PER GRASS   77.50  3.87             19    23.60    1.24  0.30 113.32'
  3     AGSM     4.50 2.25E-01 4.61E+00  6     2.66    0.44  0.59  1.2773E+01
  3     AGSP     3.60 1.80E-01 3.68E+00  2     3.27    1.63  0.91  1.5702E+01
  3     BOGR    37.00 1.85E+00 3.79E+01  7     4.82    0.69  0.13  2.3144E+01
  3     POSE    28.40 1.42E+00 2.91E+01 19    10.44    0.55  0.37  5.0130E+01
  3     SIHY     4.00 2.00E-01 4.09E+00  3     2.41    0.80  0.60  1.1572E+01
    ANN GRASS   18.70  0.93             11     4.70    0.43  0.25  22.57
  5     BRTE    13.80 6.90E-01 1.41E+01 11
  5     VUOC     4.90 2.45E-01 5.02E+00  7
    ANN FORBS    1.50  0.07              5     0.95    0.19  0.63   4.56
  4     DEPI     1.00 5.00E-02 1.02E+00  1
  4     SAKA     0.50 2.50E-02 5.12E-01  5
      TOTAL           12.08    100.00         2.9250E+01           1.4045E+02

       * NOT COMPUTED IN PERCENT COMPOSITION
       T - TRACE

 PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

 ARTR                                                   149.75
 OPPO                                                     0.84
                                   SHRUB PRODUCTION     150.59
                                         TOTAL          291.04

 PRECIPITATION DATA
  RAIN GUAGE NO.         DEMER  EXCL          JULY   20/76
 OCT. 15 TO APR. 15 =   2.26
 APR. 15 TO JULY 1  =   3.94
 JULY 1 TO SEPT. 1  =   1.21
 SEPT. 1 TO OCT. 15 =   2.22
 SEASON TOTAL       =   9.63
 LONG TERM AVERAGE  =   8.20

 ** NO UTILIZATION
```

2005 DUTCH NICK FLATS JULY 21/76 INSIDE NATIVE

NUMBER PLOTS = 20
PLOT SIZE 1X1

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER-CENT	AVE. PER-CENT BASAL AREA	PERCENT COMPO-SITION	ABS. PLOT FREQ. BASE 20	TOTAL WGT. GMS/20 SQ.FT.	AVE. WGT. /PLOT OCCUR-RENCES	WGT./ UNIT BASAL AREA	LBS PER AC.
6	*OPPO	47.00	2.35E+00		6				
	PER GRASS	565.00	28.25		20	140.12	7.01	0.25	672.81
3	BOGR	557.00	2.78E+01	9.85E+01	20	132.96	6.65	0.24	6.3843E+02
3	POSE	8.00	4.00E-01	1.41E+00	5	7.16	1.43	0.89	3.4380E+01
	ANN FORBS	0.50	0.02		3	0.28	0.09	0.56	1.34
4	DEPI	0.50	2.50E-02	8.84E-02	3				
	TOTAL		30.62	100.00		1.4040E+02			6.7416E+02

* NOT COMPUTED IN PERCENT COMPOSITION
. T = TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

OPPO		82.60
	SHRUB PRODUCTION	82.60
	TOTAL	756.76

PRECIPITATION DATA
RAIN GUAGE NO. CUTCH NICK FLATS JULY 21/76

OCT. 15 TO APR. 15 = 3.03
APR. 15 TO JULY 1 = 4.47
JULY 1 TO SEPT. 1 = 1.30
SEPT. 1 TO OCT. 15 = 1.25
SEASON TOTAL = 10.05
LONG TERM AVERAGE = 7.05

** NO UTILIZATION

2005 DUTCH NICK FLATS JULY 21/76 OUT NATIVE

NUMBER PLOTS = 20
PLOT SIZE 1X1

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER- CENT	AVE. PER- CENT BASAL AREA	PERCENT COMPO- SITION	ABS. PLOT FREQ. BASE 20	TOTAL WGT. GMS/20 SQ.FT.	AVE. WGT. /PLOT OCCUR- RENCES	WGT./ UNIT BASAL AREA	LBS PER AC.
6	*OPPO	141.00	7.05E+00		10				
	PER GRASS	438.80	21.94		20	99.93	5.00	0.23	479.83
3	BOGR	432.00	2.16E+01	9.81E+01	20	95.00	4.75	0.22	4.5616E+02
3	POSE	5.80	2.90E-01	1.32E+00	5	3.68	0.74	0.63	1.7670E+01
3	SIHY	1.00	5.00E-02	2.27E-01	1	1.25	1.25	1.25	6.0021E+00
	ANN FORBS	1.40	0.07		4	0.73	0.18	0.52	3.51
4	LARE	0.20	T	4.54E-02	1				
4	LEDE	0.10	T	2.27E-02	1				
4	PLPA	0.60	3.00E-02	1.36E-01	4				
4	UNK1	0.50	2.50E-02	1.14E-01	1				
	TOTAL		29.06	100.00		1.0066E+02			4.8334E+02

* NOT COMPUTED IN PERCENT COMPOSITION
T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

OPPO		135.87
	SHRUB PRODUCTION	135.87
	TOTAL	619.21

PRECIPITATION DATA

RAIN GUAGE NO. DUTCH NICK FLATS JULY 21/76
OCT. 15 TO APR. 15 = 3.03
APR. 15 TO JULY 1 = 4.47
JULY 1 TO SEPT. 1 = 1.30
SEPT. 1 TO OCT. 15 = 1.25
SEASON TOTAL = 10.05
LONG TERM AVERAGE = 7.05

** NO UTILIZATION

```
           0404    FARSON EXCL           AUG       2/76   INSIDE NATIVE

                              NUMBER PLOTS = 20
                                PLOT SIZE 1X1
PLANT   PLANT   TOTAL  AVE.    PERCENT  ABS.    TOTAL   AVE.    WGT./   LBS
CODE    NAME    TRANS  PER-    COMPO-   PLOT    WGT.    WGT.    UNIT    PER
                BASAL  CENT    SITION   FREQ.   GMS/20  /PLOT   BASAL   AC.
                AREA   BASAL            BASE    SQ.FT.  OCCUR-  AREA
                PER-   AREA             20              RENCES
                CENT

  6    *ARTR   211.00 1.05E+01            12
  6    *CELA     7.00 3.50E-01             1
  6    *CHVI    10.00 5.00E-01             5
  6    *EROV     8.00 4.00E-01             4
  6    *LEPU     0.20 T                    1
  6    *PHHO    98.00 4.90E+00            10
   PER GRASS    57.80  2.89               18     33.30    1.85   0.58 159.90
  3     AGSM    36.80 1.84E+00 6.14E+01 18     22.97    1.28   0.62  1.1029E+02
  3     ORHY    16.00 8.00E-01 2.67E+01  9      9.62    1.07   0.60  4.6192E+01
  3     POSE     5.00 2.50E-01 8.35E+00  2      0.71    0.35   0.14  3.4092E+00
   PER FORBS     1.00  0.05              1      0.04    0.04   0.04   0.19
  2     ASPU     1.00 5.00E-02 1.67E+00  1
   ANN FORBS     1.10  0.05              3      0.16    0.05   0.15   0.77
  4     CHFR     0.40 2.00E-02 6.68E-01  3
  4     ERCE     0.70 3.50E-02 1.17E+00  3
     TOTAL            19.70    100.00          3.3500E+01             1.6086E+02

         * NOT COMPUTED IN PERCENT COMPOSITION
         T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR                                                    144.81
ATCO                                                      5.79
CELA                                                      0.62
CHVI                                                     11.30
OPPO                                                      0.52
PHHO                                                     75.38
                                     SHRUB PRODUCTION   238.42

                                               TOTAL    399.28

PRECIPITATION DATA
 RAIN GUAGE NO.      FARSON EXCL            AUG      2/76
OCT. 15 TO APR. 15 =  --
APR. 15 TO JULY 1  =  --
JULY 1 TO SEPT. 1  =  --
SEPT. 1 TO OCT. 15 =  --
SEASON TOTAL       =  --
LONG TERM AVERAGE  =  6.52

** NO UTILIZATION
```

```
          0404    FARSON EXCL            AUG      3/76   OUT     NATIVE

                               NUMBER PLOTS = 20
                                 PLOT SIZE 1X1
PLANT  PLANT    TOTAL  AVE.    PERCENT  ABS.    TOTAL   AVE.     WGT./  LBS
CODE   NAME     TRANS  PER-    COMPO-   PLOT    WGT.    WGT.     UNIT   PER
                BASAL  CENT    SITION   FREQ.   GMS/20  /PLOT    BASAL  AC.
                AREA   BASAL            BASE    SQ.FT.  OCCUR-   AREA
                PER-   AREA             20              RENCES
                CENT

 6    *ARHO     17.00 8.50E-01             2
 6    *ARTR    285.00 1.43E+01            12
 6    *CHVI     22.00 1.10E+00             5
 6    *PHHO     53.20 2.66E+00            14
  PER GRASS     49.90  2.49               20     24.71    1.24   0.50 118.65
 3     AGSM     36.70 1.83E+00 6.85E+01   20     17.86    0.89   0.49  8.5758E+01
 3     CAEL      0.20 T        3.73E-01    1      0.14    0.14   0.70  6.7224E-01
 3     ORHY      6.00 3.00E-01 1.12E+01    3      5.57    1.86   0.93  2.6745E+01
 3     SIHY      3.00 1.50E-01 5.60E+00    2      0.31    0.15   0.10  1.4885E+00
 3     STCO      4.00 2.00E-01 7.46E+00    1      0.83    0.83   0.21  3.9854E+00
  PER FORBS      2.80  0.14                2      0.22    0.11   0.08   1.06
 2     ASPU      2.80 1.40E-01 5.22E+00    2
  ANN FORBS      0.90  0.04                6      0.24    0.04   0.27   1.15
 4     CHFR      0.90 4.50E-02 1.68E+00    6
    TOTAL             21.54    100.00          2.5170E+01            1.2086E+02

       * NOT COMPUTED IN PERCENT COMPOSITION
       T - TRACE

 PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS
   ARHO                                                4.30
   ARTR                                              176.18
   ATCO                                               15.92
   CELA                                                1.70
   CHVI                                               32.83
   GRSP                                                0.63
   OPPO                                                2.85
   PHHO                                               46.55
 PRECIPITATION DATA                 SHRUB PRODUCTION 280.96
  RAIN GUAGE NO.       FARSON EXCL          TOTAL
 OCT. 15 TO APR. 15 =  --               AUG      3/76 401.82
 APR. 15 TO JULY 1  =  --
 JULY 1 TO SEPT. 1  =  --
 SEPT. 1 TO OCT. 15 =  --
 SEASON TOTAL       =  --
 LONG TERM AVERAGE  =  6.52

  ** NO UTILIZATION
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```
          1007   GRANIT MOUNT   EXCL    AUGUST 09/76   INSIDE NATIVE

                              NUMBER PLOTS = 20
                                PLOT SIZE 1X1
   PLANT  PLANT   TOTAL  AVE.    PERCENT  ABS.    TOTAL  AVE.    WGT./  LBS
   CODE   NAME    TRANS  PER-    COMPO-   PLOT    WGT.   WGT.    UNIT   PER
                  BASAL  CENT    SITION   FREQ.  GMS/20 /PLOT   BASAL  AC.
                  AREA   BASAL            BASE   SQ.FT. OCCUR-  AREA
                  PER-   AREA             20            RENCES
                  CENT

    6    *ARTR   174.00 8.70E+00            14
    6    *PHHO    15.20 7.60E-01             4
     PER GRASS   157.00  7.85               18     48.51    2.69  0.31 232.93
    3    AGSM     37.80 1.89E+00 2.29E+01   18     27.16    1.51  0.72  1.3041E+02
    3    POFE    114.50 5.72E+00 6.93E+01   15     20.47    1.36  0.18  9.8291E+01
    3    POSE      4.70 2.35E-01 2.85E+00    5      0.88    0.18  0.19  4.2255E+00
     PER FORBS     8.20  0.41                5      1.30    0.26  0.16   6.24
    2    AGGL      2.50 1.25E-01 1.51E+00    3
    2    AST       4.20 2.10E-01 2.54E+00    5
    2    ERPU      1.20 6.00E-02 7.26E-01    2
    2    TRI       0.30 1.50E-02 1.82E-01    1
       TOTAL           17.72    100.00          4.9810E+01              2.3917E+02

         * NOT COMPUTED IN PERCENT COMPOSITION
         T - TRACE

   PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

     ARTR                                                    75.44
     PHHO                                                    34.36
                                         SHRUB PRODUCTION   109.80

                                                   TOTAL    348.97

   PRECIPITATION DATA
    RAIN GUAGE NO.        GRANIT MOUNT   EXCL    AUGUST 09/76
   OCT. 15 TO APR. 15 =  1.86
   APR. 15 TO JULY 1  =   NR
   JULY 1 TO SEPT. 1  =  5.72
   SEPT. 1 TO OCT. 15 =  0.86
   SEASON TOTAL       =  8.44
   LONG TERM AVERAGE  =  8.77

     ** NO UTILIZATION
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```
              1007    GRANIT MOUNT   EXCL    AUGUST 09/76   OUT     NATIVE

                                 NUMBER PLOTS = 20
                                   PLOT SIZE 1X1
  PLANT   PLANT   TOTAL   AVE.    PERCENT   ABS.     TOTAL   AVE.     WGT./   LBS
  CODE    NAME    TRANS   PER-    COMPO-    PLOT     WGT.    WGT.     UNIT    PER
                  BASAL   CENT    SITION    FREQ.    GMS/20  /PLOT    BASAL   AC.
                  AREA    BASAL             BASE     SQ.FT.  OCCUR-   AREA
                  PER-    AREA              20               RENCES
                  CENT

   6    *ARTR    151.00 7.55E+00             11
   6    *CHVI      1.00 5.00E-02              1
   6    *EROV      1.00 5.00E-02              1
   6    *PHHO     38.00 1.90E+00              9
    PER GRASS    124.60   6.23               20      31.80     1.59    0.26  152.69
   3     AGSM     38.90 1.94E+00 3.01E+01    20      16.86     0.84    0.43   8.0957E+01
   3     POFE     74.10 3.70E+00 5.74E+01    16      13.20     0.82    0.18   6.3382E+01
   3     POSB     11.60 5.80E-01 8.98E+00     7       1.74     0.25    0.15   8.3549E+00
    PER FORBS      4.60   0.23                4       0.52     0.13    0.11     2.50
   2     AST       1.70 8.50E-02 1.32E+00     4
   2     ERPU      2.80 1.40E-01 2.17E+00     4
   2     TRI       0.10 T        7.74E-02     1
      TOTAL             16.01    100.00              3.2320E+01                 1.5519E+02

         * NOT COMPUTED IN PERCENT COMPOSITION
         T - TRACE

  PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

    ARTR                                                          97.40
    CHVI                                                           1.38
    PHHO                                                          57.31
                                          SHRUB PRODUCTION       156.09

                                                 TOTAL           311.28
```

```
  PRECIPITATION DATA
   RAIN GUAGE NO.        GRANIT MOUNT   EXCL     AUGUST 09/76
  OCT. 15 TO APR. 15  =  1.86
  APR. 15 TO JULY 1   =   NR
  JULY 1 TO SEPT. 1   =  5.72
  SEPT. 1 TO OCT. 15  =  0.86
  SEASON TOTAL        =  8.44
  LONG TERM AVERAGE   =  8.77

                                                 UTILIZATION     47.40
                                          PRODUCTION ADJUSTED   358.68
```

```
         1007   GRANIT MOUNT   EXCL    AUGUST 09/76   INSIDE SPRAY

                           NUMBER PLOTS = 20
                             PLOT SIZE 1X1
PLANT  PLANT   TOTAL   AVE.    PERCENT   ABS.     TOTAL   AVE.     WGT./   LBS
CODE   NAME    TRANS   PER-    COMPO-    PLOT     WGT.    WGT.     UNIT    PER
               BASAL   CENT    SITION    FREQ.    GMS/20  /PLOT    BASAL   AC.
               AREA    BASAL             BASE     SQ.FT.  OCCUR-   AREA
               PER-    AREA              20               RENCES
               CENT

  6    *ARTR   217.00 1.08E+01             9
  6    *CHVI    87.00 4.35E+00             6
  6    *PHHO    12.00 6.00E-01             5
   PER GRASS   302.10 15.10               18       48.39    2.69   0.16 232.35
  3     AGSM    18.50 9.25E-01 6.12E+00   18       12.61    0.70   0.68  6.0549E+01
  3     POFE   279.00 1.39E+01 9.24E+01   18       35.18    1.95   0.13  1.6892E+02
  3     POSE     3.00 1.50E-01 9.93E-01    4        0.23    0.06   0.08  1.1044E+00
  3     SIHY     1.60 8.00E-02 5.30E-01    2        0.37    0.18   0.23  1.7766E+00
     TOTAL             30.90   100.00          4.8390E+01                2.3235E+02

      * NOT COMPUTED IN PERCENT COMPOSITION
      T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR                                                          148.52
CHVI                                                            1.54
                                          SHRUB PRODUCTION    150.06
                                               TOTAL          382.41


PRECIPITATION DATA
 RAIN GUAGE NO.          GRANIT MOUNT  EXCL    AUGUST 09/76
OCT. 15 TO APR. 15  =  1.86
APR. 15 TO JULY 1   =   NR
JULY 1 TO SEPT. 1   =  5.72
SEPT. 1 TO OCT. 15  =  0.86
SEASON TOTAL        =  8.44
LONG TERM AVERAGE   =  8.77

   ** NO UTILIZATION
```

```
           1007   GRANIT MOUNT  EXCL   AUGUST 09/76  OUT    SPRAY

                              NUMBER PLOTS = 20
                                PLOT SIZE 1X1
PLANT  PLANT   TOTAL  AVE.   PERCENT  ABS.    TOTAL  AVE.    WGT./  LBS
CODE   NAME    TRANS  PER-   COMPO-   PLOT    WGT.   WGT.    UNIT   PER
               BASAL  CENT   SITION   FREQ.   GMS/20 /PLOT   BASAL  AC.
               AREA   BASAL           BASE    SQ.FT. OCCUR-  AREA
               PER-   AREA            20             RENCES
               CENT

  6    *ARTR   325.50 1.63E+01          13
  6    *CHVI     9.00 4.50E-01           3
  6    *PHHO    49.00 2.45E+00           9
   PER GRASS   125.90  6.29             20     30.24    1.51   0.24 145.20
  3     AGSM    51.00 2.55E+00 3.72E+01 20     18.47    0.92   0.36   8.8687E+01
  3     POFE    46.00 2.30E+00 3.36E+01 11      6.69    0.61   0.15   3.2123E+01
  3     POSE    27.90 1.39E+00 2.04E+01 16      5.04    0.31   0.18   2.4201E+01
  3     SIHY     1.00 5.00E-02 7.30E-01  1      0.04    0.04   0.04   1.9207E-01
   PER FORBS    11.10  0.55              9      1.63    0.18   0.15    7.83
  2     AST      9.70 4.85E-01 7.08E+00  9
  2     ERPU     1.00 5.00E-02 7.30E-01  1
  2     TRI      0.40 2.00E-02 2.92E-01  1
     TOTAL           26.02    100.00          3.1870E+01             1.5303E+02

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

  ARTR                                                        105.28
  CHVI                                                          7.69
  PHHO                                                         32.40
                                         SHRUB PRODUCTION     145.37

                                                    TOTAL     298.40

PRECIPITATION DATA
 RAIN GUAGE NO.         GRANIT MOUNT  EXCL   AUGUST 09/76
OCT. 15 TO APR. 15 =   1.86
APR. 15 TO JULY 1  =   NR
JULY 1 TO SEPT. 1  =   5.72
SEPT. 1 TO OCT. 15 =   0.86
SEASON TOTAL       =   8.44
LONG TERM AVERAGE  =   8.77

                                         UTILIZATION     57.22
                                 ADJUSTED PRODUCTION    355.62
```

```
          0901   HALOGE PASTUR EXCL 1 JULY    8/76  INSIDE NATIVE

                              NUMBER CF PLOTS
                      COVER = 200, PRODUCTION = 20
                       PLCT SIZE 1 FT. X 10 FT.
PLANT  PLANT  TOTAL  AVE.   PERCENT  ABS.   TCTAL  AVE.   WGT./  LBS
CODE   NAME   TRANS  PER-   COMPO-   PLOT   WGT.   WGT.   UNIT   PER
              BASAL  CENT   SITION   FREQ.  GMS/   /PLOT  BASAL  AC.
              AREA   BASAL           BASE   200    CCCUR- AREA
              PER-   AREA            200    SQ.FT. RENCES
              CENT

  1  ATGA   2329.0  1.16E+01 8.84E+01144   710.18   4.93  0.30  3.4101E+02
  6  *ARSP    34.0  1.70E-01          12
  6  *ARTR    44.0  2.20E-01           2
  6  *CPPO    44.0  2.20E-01           5
   PER GRASS 272.8  1.36E+00         126   174.97   1.39  0.64  8.4015E+01
  3  POSE     37.5  1.88E-01 1.42E+00 21    11.61   0.55  0.31  5.5748E+00
  3  SIHY    235.3  1.18E+00 8.93E+00126   163.36   1.30  0.69  7.8440E+01
   PER FORBS   5.30  0.03              9     3.36   0.37  0.63   1.61
  2  ALTE      2.0  T        7.59E-02  9
  2  MACA      2.5  1.25E-02 9.49E-02  6
  2  UNK.1     0.8  T        3.04E-02  3
   ANN FORBS  27.90  0.14             17    43.78   2.58  1.57  21.02
  4  DEPI      0.3  T        1.14E-02  2
  4  HAGL      4.6  2.30E-02 1.75E-01  7
  4  LARE      0.6  T        2.28E-02  3
  4  SAKA     22.4  1.12E-01 8.50E-01 17
     TCTAL           13.8     100.00       9.32290E+02              4.47657E+02

        * NOT CCMPUTED IN PERCENT COMPOSITION
        T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

   OPPO                                                    9.68
                                         SHRUB PRODUCTION  9.68
                                                    TOTAL  457.33


PRECIPITATION DATA
 RAIN GUAGE NO.        HALOGE PASTUR EXCL 1 JULY     8/76
OCT. 15 TO APR. 15 =   1.50
APR. 15 TO JULY 1  =   2.66
JULY 1 TO SEPT. 1  =   0.68
SEPT. 1 TO OCT. 15 =   0.76
SEASON TOTAL       =   5.60
LCNG TERM AVERAGE  =   5.43

   ** NO UTILIZATION
```

```
         0905   HALOGE PASTUR EXCL.2 JULY    8/76  INSIDE NATIVE

                           NUMBER CF PLOTS
                     COVER = 200, PRODUCTICN = 20
                         PLOT SIZE 1 FT. X 10 FT.
PLANT  PLANT   TOTAL  AVE.    PERCENT  ABS.   TOTAL   AVE.     WGT./  LBS
CODE   NAME    TRANS  PER-    COMPO-   PLOT   WGT.    WGT.     UNIT   PER
               BASAL  CENT    SITION   FREQ.  GMS/    /PLOT    BASAL  AC.
               AREA   8ASAL            BASE   200     OCCUR-   AREA
               PER-   AREA             200    SQ.FT.  RENCES
               CENT

  1  ATGA     1028.1  5.14E+00 5.41E+01160    514.04    3.21  0.50  2.4683E+02
  6  *ARSP       0.1  T                  1
  6  *CFPO      15.0  7.50E-02           5
   PER GRASS   858.8  4.29E+00         149    692.30    4.65  0.81  3.3242E+02
  3  AGCR        9.0  4.50E-02 4.74E-01  4     23.70    5.92  2.63  1.1380E+01
  3  ORHY        6.0  3.00E-02 3.16E-01  1     20.52   20.52  3.42  9.8531E+00
  3  POSE      271.6  1.36E+00 1.43E+01149    110.95    0.74  0.41  5.3275E+01
  3  SIHY      572.2  2.86E+00 3.01E+01149    537.13    3.60  0.94  2.5791E+02
   PER FORBS    8.30   0.04             28      5.62    0.20  0.68   2.70
  2  ALTE        8.3  4.15E-02 4.37E-01 28
   ANN FORBS    5.00   0.02              8      0.50    0.06  0.10   0.24
  4  CEPI        0.6  T        3.16E-02  6
  4  HAGL        0.3  T        1.58E-02  1
  4  LARE        1.6  T        8.42E-02  6
  4  LEDE        0.2  T        1.05E-02  1
  4  MATA        1.8  T        9.47E-02  8
  4  SILI        0.5  T        2.63E-02  3
     TOTAL                9.6   100.00       1.21246E+03              5.82186E+02

        * NOT CCMPUTED IN PERCENT COMPOSITION
        T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS
```

OPPO	9.28
Shrub Prod.	9.28
Total	591.46

```
PRECIPITATION DATA
 RAIN GUAGE NO.       HALOGE PASTUR EXCL.2 JULY    8/76
OCT. 15 TO APR. 15 =   1.93
APR. 15 TO JULY 1  =   2.85
JULY 1 TO SEPT. 1  =   0.82
SEPT. 1 TO OCT. 15 =   0.86
SEASCN TOTAL       =   6.46
LCNG TERM AVERAGE  =   6.15
```

**No utilization

```
        C903   HALOGE PASTUR EXCL 3 JULY    8/76  INSIDE NATIVE

                                 NUMBER OF PLOTS
                            COVER = 200, PRODUCTION = 20
                             PLOT SIZE 1 FT. X 10 FT.
PLANT   PLANT   TOTAL   AVE.    PERCENT  ABS.     TOTAL    AVE.     WGT./   LBS
CODE    NAME    TRANS   PER-    COMPO-   PLOT     WGT.     WGT.     UNIT    PER
                BASAL   CENT    SITION   FREQ.    GMS/     /PLOT    BASAL   AC.
                AREA    BASAL            BASE     200      OCCUR-   AREA
                PER-    AREA             200      SQ.FT.   RENCES
                CENT

  1  ATGA     1436.2  7.18E+00 8.38E+01148    616.99    4.17  0.43  2.9626E+02
  6  *OPPO     108.0  5.40E-01          12
  6  *TESP       6.0  3.00E-02           3
   PER GRASS  243.2   1.22E+00         169    248.24    1.47  1.02  1.1920E+02
  3  SIHY     243.2   1.22E+00 1.42E+01169    248.24    1.47  1.02  1.1920E+02
   PER FORBS   16.70   0.08             47      9.45    0.20  0.57    4.54
  2  ALTE      16.7   8.35E-02 9.75E-01 47
   ANN FORBS   16.90   0.08             33      3.08    0.09  0.18    1.48
  4  DEPI       0.2   T        1.17E-02  1
  4  HAGL       2.0   T        1.17E-01  5
  4  LARE       9.9   4.95E-02 5.78E-01 33
  4  LEDE       0.6   T        3.50E-02  4
  4  MATA       4.2   2.10E-02 2.45E-01 16
     TOTAL            9.1     100.00         8.77760E+02            4.21473E+02

      * NOT COMPUTED IN PERCENT COMPOSITION
      T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS
```

OPPO		10.04
	Shrub Prod.	10.04
	Total	431.51

```
PRECIPITATION DATA
 RAIN GUAGE NO.       HALOGE PASTUR EXCL 3 JULY    8/76
OCT. 15 TO APR. 15 =   1.02
APR. 15 TO JULY 1  =   2.45
JULY 1 TO SEPT. 1  =   0.84
SEPT. 1 TO OCT. 15 =   0.64
SEASON TOTAL       =   4.95
LONG TERM AVERAGE  =   5.29
```

**No utilization

0913 HORSE CREEK EXCL JULY 29/76 INSIDE AGSM

NUMBER PLOTS = 20
PLOT SIZE 1X1

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER-CENT	AVE. PER-CENT BASAL AREA	PERCENT COMPO-SITION	ABS. PLOT FREQ. BASE 20	TOTAL WGT. GMS/20 SQ.FT.	AVE. WGT. /PLOT OCCUR-RENCES	WGT./ UNIT BASAL AREA	LBS PER AC.
6	*ARTR	22.00	1.10E+00		5				
6	*PHHO	1.00	5.00E-02		1				
	PER GRASS	59.70	2.98		20	76.66	3.83	1.28	368.10
3	AGSM	49.70	2.48E+00	7.62E+01	20	72.44	3.62	1.46	3.4783E+02
3	POSE	10.00	5.00E-01	1.53E+01	10	4.22	0.42	0.42	2.0263E+01
	ANN GRASS	3.40	0.17		11	2.24	0.20	0.66	10.76
5	BRTE	3.40	1.70E-01	5.21E+00	11				
	ANN FORBS	2.10	0.10		10	0.63	0.06	0.30	3.03
4	CHFR	0.50	2.50E-02	7.67E-01	5				
4	DEPI	1.30	6.50E-02	1.99E+00	10				
4	LARE	0.30	1.50E-02	4.60E-01	2				
	TOTAL		4.41	100.00		7.9530E+01			3.8188E+02

* NOT COMPUTED IN PERCENT COMPOSITION

T → TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR	68.94
XASA	1.30
OPPO	6.36
PHHO	0.26
Shrub Prod.	76.86
Total	458.74

PRECIPITATION DATA
RAIN GUAGE NO. HORSE CREEK EXCL JULY 29/76
OCT. 15 TO APR. 15 = 4.42
APR. 15 TO JULY 1 = 2.71
JULY 1 TO SEPT. 1 = 1.80
SEPT. 1 TO OCT. 15 = 1.68
SEASON TOTAL = 10.61
LONG TERM AVERAGE = 11.16

**No utilization

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         0913   HORSE  CREEK  EXCL   JULY   29/76  CUT    AGSM

                            NUMBER PLOTS = 20
                              PLOT SIZE 1X1
PLANT   PLANT   TOTAL  AVE.    PERCENT  ABS.   TOTAL   AVE.    WGT./   LBS
CODE    NAME    TRANS  PER-    COMPO-   PLOT   WGT.    WGT.    UNIT    PER
                BASAL  CENT    SITION   FREQ.  GMS/20  /PLOT   BASAL   AC.
                AREA   BASAL            BASE   SQ.FT.  OCCUR-  AREA
                PER-   AREA             20             RENCES
                CENT

  6    *ARTR    44.00 2.20E+00            11
  6    *OPPO     8.00 4.00E-01             2
  6    *PHHO     6.60 3.30E-01             5
  6    *XASA    15.20 7.60E-01             7
  PER GRASS     40.10  2.00               18    18.23    1.01   0.45   87.53
  3    AGSM     30.20 1.51E+00 7.33E+01 18     14.88    0.83   0.49   7.1449E+01
  3    AGSP      8.90 4.45E-01 2.16E+01  5      3.32    0.66   0.37   1.5942E+01
  3    POSE      1.00 5.00E-02 2.43E+00  1      0.03    0.03   0.03   1.4405E-01
  PER FORBS      0.70  0.03              2      0.17    0.08   0.24    0.82
  2    SPCO      0.70 3.50E-02 1.70E+00  2
  ANN FORBS      0.40  0.02              3      0.11    0.04   0.27    0.53
  4    CHFR      0.40 2.00E-02 9.71E-01  3
    TOTAL              5.75    100.00         1.8510E+01              8.8879E+01

       * NOT COMPUTED IN PERCENT COMPOSITION
       T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS
ARTR                                                         139.14
OPPO                                                          16.01
PHHO                                                           7.05
XASA                                                          11.54
                                             Shrub Prod.     173.74

                                                   Total     262.61

PRECIPITATION DATA
 RAIN GUAGE NO.          HORSE   CREEK   EXCL    JULY    29/76
OCT. 15 TO APR. 15 =    4.42
APR. 15 TO JULY 1  =    2.71
JULY 1 TO SEPT. 1  =    1.80
SEPT. 1 TO OCT. 15 =    1.68
SEASON TOTAL       =   10.61
LONG TERM AVERAGE  =   11.16

                                            Utilization       47.05
                                     Adjusted Production     309.66
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          0913   HORSE  CREEK  EXCL    JULY   25/76  INSIDE AGSP

                         NUMBER PLOTS = 20
                           PLOT SIZE 1X1
 PLANT  PLANT  TOTAL  AVE.    PERCENT  ABS.   TOTAL  AVE.    WGT./  LBS
 CODE   NAME   TRANS  PER-    COMPO-   PLOT   WGT.   WGT.    UNIT   PER
               BASAL  CENT    SITICN   FREQ.  GMS/20 /PLCT   BASAL  AC.
               AREA   BASAL            BASE   SQ.FT. OCCUR-  AREA
               PER-   AREA             20            RENCES
               CENT

   6    *ARTR  197.00 9.85E+00          13
   6    *CHVI    1.00 5.00E-02           1
   6    *PHHO   11.00 5.50E-01           7
    PER GRASS   53.30  2.66             16     55.13    3.45  1.03 264.72
   3    AGSM     6.40 3.20E-01 1.20E+01 10      8.18    0.82  1.28  3.9278E+01
   3    AGSP    37.50 1.87E+00 7.04E+01 16     43.25    2.70  1.15  2.0767E+02
   3    POSE     2.90 1.45E-01 5.44E+00  5      0.42    0.08  0.14  2.0167E+00
   3    SIHY     6.50 3.25E-01 1.22E+01  3      3.28    1.09  0.50  1.5750E+01
      TOTAL           13.11    100.00         5.5130E+01            2.6472E+02

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE

 PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

 ARTR                                                        26.44
 OPPO                                                         7.69
 PHHO                                                         1.34
 XASA                                                         2.19
                                            Shrub Prod.      37.66

                                                 Total      302.38

 PRECIPITATION DATA
  RAIN GUAGE NO.       HORSE  CREEK  EXCL    JULY   25/76
 OCT. 15 TO APR. 15  =
 APR. 15 TO JULY 1   =
 JULY 1 TO SEPT. 1   =
 SEPT. 1 TO OCT. 15  =
 SEASON TOTAL        =
 LONG TERM AVERAGE   =

 **No utilization
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          0913   HORSE  CREEK  EXCL    JULY   29/76  OUT    AGSP

                          NUMBER PLOTS = 20
                             PLOT SIZE 1X1
  PLANT  PLANT    TOTAL  AVE.    PERCENT  ABS.    TOTAL   AVE.    WGT./  LBS
  CODE   NAME     TRANS  PER-    COMPO-   PLOT    WGT.    WGT.    UNIT   PER
                  BASAL  CENT    SITION   FREQ.   GMS/20  /PLOT   BASAL  AC.
                  AREA   BASAL            BASE    SQ.FT.  OCCUR-  AREA
                  PER-   AREA             20              RENCES
                  CENT

     6   *ARTR    19.00 9.50E-01             5
     6   *CELA     0.40 2.00E-02             1
     6   *PHHO    32.00 1.60E+00            12
     6   *XASA    14.20 7.10E-01             9
      PER GRASS   23.90  1.19               16    16.74    1.05   0.70   80.38
     3   AGSM     16.10 8.05E-01 5.83E+01  16    12.42    0.78   0.77   5.9637E+01
     3   AGSP      6.70 3.35E-01 2.43E+01   6     3.85    0.64   0.57   1.8487E+01
     3   POSE      1.10 5.50E-02 3.99E+00   2     0.47    0.23   0.43   2.2568E+00
      PER FORBS    3.10  0.15                3     2.39    0.80   0.77   11.48
     2   CRBR      1.00 5.00E-02 3.62E+00   2
     2   PEN       1.20 6.00E-02 4.35E+00   2
     2   SPCO      0.90 4.50E-02 3.26E+00   3
      ANN FORBS    0.60  0.03                4     0.13    0.03   0.22    0.62
     4   CHFR      0.40 2.00E-02 1.45E+00   4
     4   DEPI      0.10 T        3.62E-01   1
     4   LARE      0.10 T        3.62E-01   1
       TOTAL            4.66     100.00           1.9260E+01              9.2481E+01

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE

  PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

  ARTR                                                    115.96
  OPPO                                                     17.64
  PHHO                                                     10.10
  XASA                                                      9.43
                                          Shrub Prod.     153.13
                                                Total     245.61

  PRECIPITATION DATA
   RAIN GUAGE NO.          HORSE  CREEK  EXCL    JULY    29/76
  OCT. 15 TO APR. 15 =      4.42
  APR. 15 TO JULY 1  =      2.71
  JULY 1 TO SEPT. 1  =      1.80
  SEPT. 1 TO OCT. 15 =      1.68
  SEASON TOTAL       =     10.61
  LONG TERM AVERAGE  =     11.16

                                          Utilization      54.70
                                  Adjusted Production     300.31
          0914   KANE   DEER   EXCL   JULY   29/76  INSIDE NATIVE

                           NUMBER PLOTS = 20
                             PLOT SIZE 1X1
 PLANT  PLANT   TOTAL  AVE.    PERCENT  ABS.   TOTAL   AVE.    WGT./  LBS
 CODE   NAME    TRANS  PER-    COMPO-   PLOT   WGT.    WGT.    UNIT   PER
                BASAL  CENT    SITION   FREQ.  GMS/20  /PLOT   BASAL  AC.
                AREA   BASAL            BASE   SQ.FT.  OCCUR-  AREA
                PER-   AREA             20             RENCES
                CENT

   6    *XASA     2.00 1.00E-01         1
   6    *JUOS   160.00 8.00E+00         3
   6    *PHHO     5.00 2.50E-01         3
  PER GRASS       6.50  0.32            6        2.97    0.49   0.46  14.26
   3    AGGR      5.50 2.75E-01 5.50E+01 6       2.34    0.39   0.43  1.1236E+01
   3    STCO      1.00 5.00E-02 1.00E+01 1       0.63    0.63   0.63  3.0251E+00
  PER FORBS       3.30  0.16            2        0.73    0.36   0.22   3.51
   2    EROC      0.20 T        2.00E+00 1
   2    GISP      1.00 5.00E-02 1.00E+01 1
   2    LEAL      2.10 1.05E-01 2.10E+01 2
  ANN FORBS       0.20  0.01            1        0.04    0.04   0.20   0.19
   4    LARE      0.20 T        2.00E+00 1
     TOTAL             8.85    100.00          3.7400E+00             1.7958E+01

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE

 PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

 NO SHRUB DATA COLLECTED

 PRECIPITATION DATA
  RAIN GUAGE NO.        KANE    DEER    EXCL    JULY    29/76
 OCT. 15 TO APR. 15 =    3.22
 APR. 15 TO JULY 1  =    5.85
 JULY 1 TO SEPT. 1  =    1.76
 SEPT. 1 TO OCT. 15 =    1.25
 SEASON TOTAL       =   12.08
 LONG TERM AVERAGE  =   12.30

 **No utilization
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                0914    KANE    DEER    EXCL    JULY    29/76  CUT    NATIVE

                              NUMBER PLOTS = 20
                                PLOT SIZE 1X1
   PLANT   PLANT   TOTAL   AVE.    PERCENT  ABS.    TOTAL   AVE.    WGT./   LBS
   CODE    NAME    TRANS   PER-    COMPO-   PLOT    WGT.    WGT.    UNIT    PER
                   BASAL   CENT    SITION   FREQ.   GMS/20  /PLOT   BASAL   AC.
                   AREA    BASAL            BASE    SQ.FT.  OCCUR-  AREA
                   PER-    AREA             20              RENCES
                   CENT

     6    *ARTR      5.00 2.50E-01              1
     6    *JUOS    232.00 1.16E+01              8
     6    *PHHO      2.00 1.00E-01              1
    PER GRASS       23.70  1.18                11       7.62    0.69   0.32   36.59
     3    AGGR      22.50 1.12E+00 7.98E+01   11       7.52    0.68   0.33   3.6109E+01
     3    POSE       1.20 6.00E-02 4.26E+00    1       0.10    0.10   0.08   4.8017E-01
    PER FORBS        4.50  0.22                 4       1.01    0.25   0.22    4.85
     2    EROC       3.50 1.75E-01 1.24E+01    4
     2    LEAL       1.00 5.00E-02 3.55E+00    1
        TOTAL             13.36    100.00          8.6300E+00             4.1439E+01

          * NOT COMPUTED IN PERCENT COMPOSITION
          T - TRACE

   PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

   NO SHRUB DATA COLLECTED

   PRECIPITATION DATA
    RAIN GUAGE NO.         KANE    DEER   EXCL    JULY    29/76
   OCT. 15 TO APR. 15 =    3.22
   APR. 15 TO JULY 1  =    5.85
   JULY 1 TO SEPT. 1  =    1.76
   SEPT. 1 TO OCT. 15 =    1.25
   SEASON TOTAL       =   12.08
   LONG TERM AVERAGE  =   12.30
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Utilization 4.02

Adjusted Production 45.46

0914 KANE DEER EXCL JULY 29/76 INSIDE SPRAY

NUMBER PLOTS = 20
PLOT SIZE 1X1

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER-CENT	AVE. PER-CENT BASAL AREA	PERCENT COMPO-SITION	ABS. PLOT FREQ. BASE 20	TOTAL WGT. GMS/20 SQ.FT.	AVE. WGT. /PLOT OCCUR-RENCES	WGT./ UNIT BASAL AREA	LBS PER AC.
6	*ARFR	2.00	1.00E-01		1				
6	*ARNO	11.00	5.50E-01		1				
6	*XASA	7.00	3.50E-01		5				
	PER GRASS	98.20	4.91		12	66.68	5.56	0.68	320.18
3	AGGR	85.00	4.25E+00	5.83E+01	12	59.51	4.96	0.70	2.8575E+02
3	POSE	2.20	1.10E-01	1.51E+00	4	0.20	0.05	0.09	9.6034E-01
3	STCO	11.00	5.50E-01	7.55E+00	1	6.97	6.97	0.63	3.3468E+01
	PER FORBS	46.70	2.33		10	26.00	2.60	0.56	124.84
2	EROC	6.00	3.00E-01	4.12E+00	4				
2	GISP	12.10	6.05E-01	8.30E+00	5				
2	LEAL	23.60	1.18E+00	1.62E+01	10				
2	UNK1	5.00	2.50E-01	3.43E+00	3				
	ANN GRASS	0.70	0.03		2	0.21	0.10	0.30	1.01
5	BRTE	0.70	3.50E-02	4.80E-01	2				
	ANN FORBS	0.10	0.00		1	2.50	2.50	25.00	12.00
4	LARE	0.10	T	6.86E-02	1				
	TOTAL		8.18	100.00		9.5390E+01			4.5803E+02

* NOT COMPUTED IN PERCENT COMPOSITION
T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

NO SHRUB DATA COLLECTED

PRECIPITATION DATA
RAIN GUAGE NO. KANE DEER EXCL JULY 29/76
OCT. 15 TO APR. 15 = 3.22
APR. 15 TO JULY 1 = 5.85
JULY 1 TO SEPT. 1 = 1.76
SEPT. 1 TO OCT. 15 = 1.25
SEASON TOTAL = 12.08
LONG TERM AVERAGE = 12.30

**No utilization

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         0914   KANE   DEER   EXCL   JULY   29/76  OUT    SPRAY

                           NUMBER PLOTS = 20
                             PLOT SIZE 1X1
  PLANT  PLANT   TOTAL  AVE.   PERCENT  ABS.   TOTAL   AVE.   WGT./  LBS
  CODE   NAME    TRANS  PER-   COMPO-   PLOT   WGT.    WGT.   UNIT   PER
                 BASAL  CENT   SITION   FREQ.  GMS/20  /PLOT  BASAL  AC.
                 AREA   BASAL           BASE   SQ.FT.  OCCUR- AREA
                 PER-   AREA            20             RENCES
                 CENT

    6    *ARFR    2.00 1.00E-01            1
    6    *XASA   34.50 1.72E+00           11
    6    *JUOS   21.00 1.05E+00            4
    6    *OPPO   12.00 6.00E-01            1
    6    *PHHO    8.60 4.30E-01            5
     PER GRASS   30.40  1.52               3   10.20    3.40  0.34   48.98
    3    AGGR    29.40 1.47E+00 5.04E+01   3    9.89    3.30  0.34   4.7489E+01
    3    POSE     1.00 5.00E-02 1.72E+00   1    0.31    0.31  0.31   1.4885E+00
     PER FORBS   27.90  1.39               7    8.94    1.28  0.32   42.93
    2    EROC     4.00 2.00E-01 6.86E+00   3
    2    GISP    14.00 7.00E-01 2.40E+01   4
    2    LEAL     1.20 6.00E-02 2.06E+00   1
    2    UNK1     8.70 4.35E-01 1.49E+01   7
       TOTAL            6.82    100.00        1.9140E+01             9.1904E+01

          * NOT COMPUTED IN PERCENT COMPOSITION
          T - TRACE

  PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS
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NO SHRUB DATA COLLECTED

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  PRECIPITATION DATA
   RAIN GUAGE NO.       KANE   DEER   EXCL   JULY   29/76
  OCT. 15 TO APR. 15 =   3.22
  APR. 15 TO JULY 1  =   5.85
  JULY 1 TO SEPT. 1  =   1.76
  SEPT. 1 TO OCT. 15 =   1.25
  SEASON TOTAL       =  12.08
  LONG TERM AVERAGE  =  12.30
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Utilization 5.45
Adjusted Production 97.35

0921 KANE G.R.I. EXCL JULY 29/76 INSIDE SPRAY

NUMBER PLOTS = 20
PLOT SIZE 1X1

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER-CENT	AVE. PER-CENT BASAL AREA	PERCENT COMPO-SITION	ABS. PLOT FREQ. BASE 20	TOTAL WGT. GMS/20 SQ.FT.	AVE. WGT. /PLOT OCCUR-RENCES	WGT./ UNIT BASAL AREA	LBS PER AC.
6	*ARNO	39.00	1.95E+00		3				
6	*XASA	12.00	6.00E-01		6				
	PER GRASS	63.40	3.17		11	33.09	3.01	0.52	158.89
3	AGGR	58.40	2.92E+00	7.79E+01	11	32.52	2.96	0.56	1.5615E+02
3	POSE	5.00	2.50E-01	6.67E+00	3	0.57	0.19	0.11	2.7370E+00
	PER FORBS	1.50	0.07		1	1.61	1.61	1.07	7.73
2	ARHO	0.20	T	2.67E-01	1				
2	CIR	0.10	T	1.33E-01	1				
2	ERPU	0.20	T	2.67E-01	1				
2	UNK	1.00	5.00E-02	1.33E+00	1				
	ANN GRASS	1.50	0.07		2	0.83	0.41	0.55	3.99
5	BRTE	1.50	7.50E-02	2.00E+00	2				
	ANN FORBS	8.60	0.43		9	9.49	1.05	1.10	45.57
4	DEPI	0.10	T	1.33E-01	1				
4	DRRE	1.80	9.00E-02	2.40E+00	3				
4	SAKA	0.10	T	1.33E-01	1				
4	UNK1	5.00	2.50E-01	6.67E+00	9				
4	UNK2	1.10	5.50E-02	1.47E+00	4				
4	UNK3	0.50	2.50E-02	6.67E-01	1				
	TOTAL		6.30	100.00		4.5020E+01			2.1617E+02

* NOT COMPUTED IN PERCENT COMPOSITION
T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

NO SHRUB DATA COLLECTED

PRECIPITATION DATA
RAIN GUAGE NO. KANE G.R.I. EXCL JULY 29/76
OCT. 15 TO APR. 15 = 3.15
APR. 15 TO JULY 1 = 5.76
JULY 1 TO SEPT. 1 = 1.81
SEPT. 1 TO OCT. 15 = 1.36
SEASON TOTAL = 12.08
LONG TERM AVERAGE = 13.03

**No utilization

```
            0921    KANE    G.R.I. EXCL    JULY    29/76  OUT     NATIVE

                              NUMBER PLOTS = 20
                                PLOT SIZE 1X1
    PLANT  PLANT   TOTAL  AVE.    PERCENT  ABS.   TOTAL   AVE.   WGT./  LBS
    CODE   NAME    TRANS  PER-    COMPO-   PLOT   WGT.    WGT.   UNIT   PER
                   BASAL  CENT    SITION   FREQ.  GMS/20 /PLOT   BASAL  AC.
                   AREA   BASAL            BASE   SQ.FT. OCCUR-  AREA
                   PER-   AREA             20            RENCES
                   CENT

      6    *ARNO  184.00 9.20E+00            9
      6    *JUOS  194.00 9.70E+00            5
      6    *PHHO    7.00 3.50E-01            2
       PER GRASS    4.70  0.23               4      1.61    0.40  0.34   7.73
      3    AGGR     4.10 2.05E-01 1.77E+01   4      1.58    0.39  0.39  7.5867E+00
      3    POSE     0.60 3.00E-02 2.59E+00   2      0.03    0.01  0.05  1.4405E-01
       PER FORBS   18.50  0.92              11      3.30    0.30  0.18  15.85
      2    ARHO     5.00 2.50E-01 2.16E+01   3
      2    ERI      4.00 2.00E-01 1.72E+01   2
      2    EROC     9.50 4.75E-01 4.09E+01  11
         TOTAL           20.41    100.00          4.9100E+00            2.3576E+01

           * NOT COMPUTED IN PERCENT COMPOSITION
           T - TRACE

    PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

     NO SHRUB DATA COLLECTED



    PRECIPITATION DATA
     RAIN GUAGE NO.          KANE    G.R.I. EXCL    JULY    29/76
    OCT. 15 TO APR. 15 =    3.15
    APR. 15 TO JULY 1  =    5.76
    JULY 1 TO SEPT. 1  =    1.81
    SEPT. 1 TO OCT. 15 =    1.36
    SEASON TOTAL       =   12.08
    LONG TERM AVERAGE  =   13.03

     **No utilization
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1502 KIRBY CREEK EXCL JULY 26/76 INSIDE NATIVE

NUMBER PLOTS = 20
PLOT SIZE 1X1

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER-CENT	AVE. PER-CENT BASAL AREA	PERCENT COMPO-SITION	ABS. PLOT FREQ. BASE 20	TOTAL WGT. GMS/20 SQ.FT.	AVE. WGT. /PLCT OCCUR-RENCES	WGT./ UNIT BASAL AREA	LBS PER AC.
6	*SAVE	159.70	7.98E+00		10				
	PER GRASS	53.20	2.66		14	43.41	3.10	0.82	208.44
3	AGSM	23.70	1.18E+00	2.56E+01	14	33.40	2.39	1.41	1.6038E+02
3	POSE	29.50	1.47E+00	3.19E+01	8	10.01	1.25	0.34	4.8065E+01
	ANN GRASS	25.00	1.25		14	28.24	2.02	1.13	135.60
5	BRTE	25.00	1.25E+00	2.70E+01	14				
	ANN FORBS	14.30	0.71		14	15.90	1.14	1.11	76.35
4	LEDE	14.30	7.15E-01	1.55E+01	14				
	TOTAL		12.61	100.00		8.7550E+01			4.2039E+02

* NOT COMPUTED IN PERCENT COMPOSITION
T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

OPPO		1.72
SAVE		105.64
	Shrub Prod.	107.36
	Total	527.75

PRECIPITATION DATA
RAIN GUAGE NO. KIRBY CREEK EXCL JULY 26/76

OCT. 15 TO APR. 15	=	3.17
APR. 15 TO JULY 1	=	3.80
JULY 1 TO SEPT. 1	=	1.52
SEPT. 1 TO OCT. 15	=	1.75
SEASON TOTAL	=	10.24
LONG TERM AVERAGE	=	9.27

**No utilization

```
          1502   KIRBY  CREEK   EXCL    JULY    26/76   OUT     NATIVE

                                 NUMBER PLOTS = 20
                                   PLOT SIZE 1X1
  PLANT  PLANT   TOTAL  AVE.    PERCENT  ABS.    TOTAL   AVE.    WGT./   LBS
  CODE   NAME    TRANS  PER-    COMPO-   PLOT    WGT.    WGT.    UNIT    PER
                 BASAL  CENT    SITION   FREQ.   GMS/20  /PLCT   BASAL   AC.
                 AREA   BASAL            BASE    SQ.FT.  OCCUR-  AREA
                 PER-   AREA             20              RENCES
                 CENT

   6    *OPPO     4.00 2.00E-01            1
   6    *SAVE    38.60 1.93E+00            9
    PER GRASS    32.80  1.64              12     26.33    2.19   0.80  126.43
   3     AGSM    29.50 1.47E+00 5.15E+01  12     24.96    2.08   0.85   1.1985E+02
   3     POSE     2.30 1.15E-01 4.01E+00   3      0.51    0.17   0.22   2.4489E+00
   3    SPAI      1.00 5.00E-02 1.75E+00   1      0.86    0.86   0.86   4.1295E+00
    ANN GRASS     5.50  0.27               9      2.89    0.32   0.53   13.88
   5    BRTE      5.50 2.75E-01 9.60E+00   9
    ANN FORBS    19.00  0.95              19     10.47    0.55   0.55   50.27
   4     LEDE    19.00 9.50E-01 3.32E+01  19
       TOTAL            4.99    100.00          3.9690E+01              1.9058E+02

             * NOT COMPUTED IN PERCENT COMPOSITION
             T - TRACE

  PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

  OPPO                                                        4.27
  SAVE                                                       79.82
                                               Shrub Prod.   84.09

                                                     Total  274.67

  PRECIPITATION DATA
   RAIN GUAGE NO.        KIRBY  CREEK  EXCL    JULY    26/76
  OCT. 15 TO APR. 15 =    3.17
  APR. 15 TO JULY 1  =    3.80
  JULY 1 TO SEPT. 1  =    1.52
  SEPT. 1 TO OCT. 15 =    1.75
  SEASON TOTAL       =   10.24
  LONG TERM AVERAGE  =    9.27

                                                 Utilization    4.22
                                          Adjusted production 278.89
```

```
              1001   LANDER ANT     EXCL    AUGUST 9/76    INSIDE NATIVE

                              NUMBER PLOTS = 20
                               PLOT SIZE 1X1
PLANT   PLANT   TOTAL  AVE.    PERCENT   ABS.    TOTAL   AVE.    WGT./  LBS
CODE    NAME    TRANS  PER-    COMPO-    PLOT    WGT.    WGT.    UNIT   PER
                BASAL  CENT    SITION    FREQ.   GMS/20  /PLOT   BASAL  AC.
                AREA   BASAL             BASE    SQ.FT.  OCCUR-  AREA
                PER-   AREA              20              RENCES
                CENT

  6    *ARTR   219.00 1.09E+01           16
  6    *OPPO     7.00 3.50E-01            1
  6    *PHHO    24.00 1.20E+00            8
   PER GRASS    56.50  2.82              17      22.29    1.31   0.39 107.03
  3     AGSM    12.50 6.25E-01 2.05E+01 17        7.49    0.44   0.60  3.5965E+01
  3     BOGR     2.50 1.25E-01 4.10E+00  1        0.29    0.29   0.12  1.3925E+00
  3     CAEL     1.80 9.00E-02 2.95E+00  5        1.21    0.24   0.67  5.8100E+00
  3     ORHY    37.70 1.88E+00 6.18E+01  9       12.91    1.43   0.34  6.1990E+01
  3     POSB     2.00 1.00E-01 3.28E+00  3        0.39    0.13   0.19  1.8727E+00
   PER FORBS     4.50  0.22               4       0.89    0.22   0.20   4.27
  2     ERPU     1.30 6.50E-02 2.13E+00  2
  2     SPCO     3.20 1.60E-01 5.25E+00  4
     TOTAL            15.55    100.00           2.3180E+01                1.1130E+02

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE
```

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR		42.91
OPPO		27.13
PHHO		9.92
	Shrub Prod.	79.96
	Total	191.28

```
PRECIPITATION DATA
 RAIN GUAGE NO.        LANDER ANT     EXCL    AUGUST 9/76
OCT. 15 TO APR. 15 =   1.63
APR. 15 TO JULY 1  =   3.16
JULY 1 TO SEPT. 1  =   1.44
SEPT. 1 TO OCT. 15 =   0.90
SEASON TOTAL       =   7.13
LONG TERM AVERAGE  =   8.64
```

**No utilization

```
          1001   LANDER ANT    EXCL   AUGUST 9/76   CUT    NATIVE

                            NUMBER PLOTS = 20
                              PLOT SIZE 1X1
PLANT  PLANT  TOTAL  AVE.   PERCENT  ABS.   TOTAL   AVE.   WGT./  LBS
CODE   NAME   TRANS  PER-   COMPO-   PLOT   WGT.    WGT.   UNIT   PER
              BASAL  CENT   SITION   FREQ.  GMS/20  /PLOT  BASAL  AC.
              AREA   BASAL           BASE   SQ.FT.  OCCUR- AREA
              PER-   AREA            20             RENCES
              CENT

  6   *ARTR  195.50 9.77E+00          16
  6   *PHHO   11.00 5.50E-01           3
   PER GRASS  55.10  2.75             19    16.90    0.89   0.31   81.15
  3   AGSM    19.50 9.75E-01 3.31E+01 19     9.49    0.50   0.49   4.5568E+01
  3   BOGR    17.00 8.50E-01 2.88E+01  3     2.02    0.67   0.12   9.6994E+00
  3   ORHY     5.00 2.50E-01 8.47E+00  4     1.37    0.34   0.27   6.5783E+00
  3   POSE     7.60 3.80E-01 1.29E+01 12     2.39    0.20   0.31   1.1476E+01
  3   STCO     6.00 3.00E-01 1.02E+01  3     1.63    0.54   0.27   7.8268E+00
   PER FORBS   3.90  0.19              6     0.91    0.15   0.23    4.37
  2   ERPU     0.70 3.50E-02 1.19E+00  2
  2   SPCO     3.20 1.60E-01 5.42E+00  6
     TOTAL          13.27    100.00         1.7810E+01                8.5518E+01

         * NOT COMPUTED IN PERCENT COMPOSITION
         T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR                                                     47.62
OPPO                                                     29.36
PHHO                                                     14.09
                                          Shrub Prod.    91.07
                                               Total    176.58

PRECIPITATION DATA
 RAIN GUAGE NO.          LANDER ANT     EXCL    AUGUST 9/76
OCT. 15 TO APR. 15  =    1.63
APR. 15 TO JULY 1   =    3.16
JULY 1 TO SEPT. 1   =    1.44
SEPT. 1 TO OCT. 15  =    0.90
SEASON TOTAL        =    7.13
LONG TERM AVERAGE   =    8.64

                                          Utilization        3.27
                                   Adjusted Production     179.85
          1003   LOWER  GOVT   DRAW   AUGUST 10/76  INSIDE NATIVE

                            NUMBER PLOTS = 20
                              PLOT SIZE 1X1
PLANT   PLANT   TOTAL   AVE.    PERCENT    ABS.    TOTAL   AVE.    WGT./   LBS
CODE    NAME    TRANS   PER-    COMPO-     PLOT    WGT.    WGT.    UNIT    PER
                BASAL   CENT    SITION     FREQ.   GMS/20  /PLOT   BASAL   AC.
                AREA    BASAL              BASE    SQ.FT.  OCCUR-  AREA
                PER-    AREA               20              RENCES
                CENT

  6    *ARTR   210.00 1.05E+01             12
  6    *OPPO    17.00 8.50E-01              1
   PER GRASS    64.40  3.22                20      40.68    2.03   0.63 195.33
  3    AGSM     30.20 1.51E+00 4.25E+01    20      16.44    0.82   0.54  7.8940E+01
  3    CAEL      0.60 3.00E-02 8.45E-01     1       0.07    0.07   0.12  3.3612E-01
  3    POSE      5.20 2.60E-01 7.32E+00     6       1.89    0.31   0.36  9.0752E+00
  3    STCO     28.40 1.42E+00 4.00E+01     9      22.28    2.48   0.78  1.0698E+02
   ANN GRASS     6.60  0.33                12       4.74    0.39   0.72  22.76
  5    BRTE      6.60 3.30E-01 9.30E+00    12
      TOTAL          14.90    100.00           4.5420E+01                2.1809E+02

       * NOT COMPUTED IN PERCENT COMPOSITION
       T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

 ARTR                                                        335.53
 CHVI                                                          1.89
 OPPO                                                          4.10
                                               Shrub Prod.   341.52
                                                     Total   559.61
PRECIPITATION DATA
 RAIN GUAGE NO.        LOWER  GOVT   DRAW   AUGUST 10/76
OCT. 15 TO APR. 15 =   1.77
APR. 15 TO JULY 1  =   4.50
JULY 1 TO SEPT. 1  =   2.61
SEPT. 1 TO OCT. 15 =   0.80
SEASON TOTAL       =   9.68
LONG TERM AVERAGE  =  10.85

 **No utilization
```

```
             1003    LOWER   GOVT    DRAW    AUGUST 10/76   CUT     NATIVE

                              NUMBER PLOTS = 20
                                PLOT SIZE 1X1
PLANT   PLANT    TOTAL   AVE.    PERCENT   ABS.    TOTAL   AVE.    WGT./   LBS
CODE    NAME     TRANS   PER-    COMPO-    PLOT    WGT.    WGT.    UNIT    PER
                 BASAL   CENT    SITION    FREQ.   GMS/20  /PLOT   BASAL   AC.
                 AREA    BASAL             BASE    SQ.FT.  OCCUR-  AREA
                 PER-    AREA              20              RENCES
                 CENT

  6    *ARTR    400.40  2.00E+01            16
   PER GRASS     40.90   2.04               14     12.70    0.91   0.31   60.98
  3     AGSM     15.70  7.85E-01 3.43E+01   14      7.29    0.52   0.46   3.5004E+01
  3     KOCR      5.50  2.75E-01 1.20E+01    3      1.13    0.38   0.21   5.4259E+00
  3     POSE      6.50  3.25E-01 1.42E+01    9      1.67    0.19   0.26   8.0188E+00
  3     STCO     13.20  6.60E-01 2.88E+01    8      2.61    0.33   0.20   1.2532E+01
   PER FORBS      2.80   0.14                4      0.86    0.21   0.31    4.13
  2     AST       1.00  5.00E-02 2.18E+00    1
  2     SPCO      1.80  9.00E-02 3.93E+00    4
   ANN GRASS      2.10   0.10                7      1.13    0.16   0.54    5.43
  5     BRTE      2.10  1.05E-01 4.59E+00    7
      TOTAL             22.31    100.00            1.4690E+01             7.0537E+01

          * NOT COMPUTED IN PERCENT COMPOSITION
          T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR                                                          340.31
CELA                                                            0.24
CHVI                                                           10.84
OPPO                                                            3.09
                                              Shrub prod.     354.48
PRECIPITATION DATA                                  Total     425.02
 RAIN GUAGE NO.        LOWER   GOVT   DRAW   AUGUST 10/76
OCT. 15 TO APR. 15 =    1.77
APR. 15 TO JULY 1  =    4.50
JULY 1 TO SEPT. 1  =    2.61
SEPT. 1 TO OCT. 15 =    0.80
SEASON TOTAL       =    9.68
LONG TERM AVERAGE  =   10.85

                                          ~~Utilization~~        ~~37.21~~
                                  Adjusted Production         462.23
```

1003 LOWER GOVT DRAW AUGUST 10/76 INSIDE SPRAY

NUMBER PLOTS = 20
PLOT SIZE 1X1

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER-CENT	AVE. PER-CENT BASAL AREA	PERCENT COMPO-SITION	ABS. PLOT FREQ. BASE 20	TOTAL WGT. GMS/20 SQ.FT.	AVE. WGT. /PLOT OCCUR-RENCES	WGT./ UNIT BASAL AREA	LBS PER AC.
6	*OPPO	1.00	5.00E-02		1				
	PER GRASS	98.40	4.92		20	127.28	6.36	1.29	611.16
3	AGSM	62.50	3.13E+00	4.76E+01	20	75.53	3.78	1.21	3.6267E+02
3	POSE	1.40	7.00E-02	1.07E+00	3	1.06	0.35	0.76	5.089BE+00
3	STCO	34.50	1.72E+00	2.63E+01	9	50.69	5.63	1.47	2.4340E+02
	PER FORBS	3.40	0.17		2	2.69	1.34	0.79	12.92
2	ASPU	0.40	2.00E-02	3.05E-01	1				
2	SPCO	3.00	1.50E-01	2.28E+00	2				
	ANN GRASS	29.50	1.47		20	18.81	0.94	0.64	90.32
5	BRTE	29.50	1.47E+00	2.25E+01	20				
	TOTAL		6.61	100.00		1.4878E+02			7.1440E+02

* NOT COMPUTED IN PERCENT COMPOSITION
T → TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR		11.15
	Shrub Prod.	11.15
	Total	725.55

PRECIPITATION DATA
RAIN GUAGE NO. LOWER GOVT DRAW AUGUST 10/76
OCT. 15 TO APR. 15 = 1.77
APR. 15 TO JULY 1 = 4.50
JULY 1 TO SEPT. 1 = 2.61
SEPT. 1 TO OCT. 15 = 0.80
SEASON TOTAL = 9.68
LONG TERM AVERAGE = 10.85

**No utilization

```
        1003   LOWER  GOVT   DRAW   AUGUST 10/76  CUT    SPRAY

                          NUMBER PLOTS = 20
                            PLOT SIZE 1X1
PLANT  PLANT    TOTAL  AVE.     PERCENT    ABS.   TOTAL    AVE.    WGT./  LBS
CODE   NAME     TRANS  PER-     COMPO-     PLOT   WGT.     WGT.    UNIT   PER
                BASAL  CENT     SITION     FREQ.  GMS/20   /PLOT   BASAL  AC.
                AREA   BASAL               BASE   SQ.FT.   OCCUR-  AREA
                PER-   AREA                20              RENCES
                CENT

  6    *ARTR    85.00 4.25E+00               4
  6    *CHVI     5.50 2.75E-01               3
 PER GRASS      65.90  3.29                 20     15.46    0.77   0.23   74.23
  3    AGSM     41.00 2.05E+00 5.85E+01    20     10.57    0.53   0.26   5.0754E+01
  3    POFE     10.10 5.05E-01 1.44E+01     5      1.18    0.24   0.12   5.6660E+00
  3    POSE     11.80 5.90E-01 1.68E+01    15      3.34    0.22   0.28   1.6038E+01
  3    STCO      3.00 1.50E-01 4.28E+00     1      0.37    0.37   0.12   1.7766E+00
 PER FORBS       2.00  0.10                  2      0.55    0.27   0.27    2.64
  2    SPCO      2.00 1.00E-01 2.85E+00     2
 ANN GRASS       2.20  0.11                  2      0.04    0.02   0.02    0.19
  5    BRTE      2.20 1.10E-01 3.14E+00     2
    TOTAL              8.03     100.00           1.6050E+01                7.7067E+01

       * NOT COMPUTED IN PERCENT COMPOSITION
       T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS
```

ARTR		33.92
CELA		0.14
CHVI		2.47
	Shrub Prod.	36.53
	Total	113.60

```
PRECIPITATION DATA
 RAIN GUAGE NO.        LOWER   GOVT   DRAW   AUGUST 10/76
OCT. 15 TO APR. 15 =    1.77
APR. 15 TO JULY 1  =    4.50
JULY 1 TO SEPT. 1  =    2.61
SEPT. 1 TO OCT. 15 =    0.80
SEASON TOTAL       =    9.68
LONG TERM AVERAGE  =   10.85
```

Utilization	98.26
Adjusted Production	209.86

```
        1004   MCGRAW FLATS          AUGUST 10/76  INSIDE NATIVE

                            NUMBER PLOTS = 20
                             PLOT SIZE 1X1
  PLANT  PLANT   TOTAL  AVE.     PERCENT  ABS.    TOTAL   AVE.    WGT./  LBS
  CODE   NAME    TRANS  PER-     COMPO-   PLOT    WGT.    WGT.    UNIT   PER
                 BASAL  CENT     SITION   FREQ.   GMS/20  /PLOT   BASAL  AC.
                 AREA   BASAL             BASE    SQ.FT.  OCCUR-  AREA
                 PER-   AREA              20              RENCES
                 CENT

   6    *ARHO      5.00 2.50E-01            1
   6    *ARTR    248.00 1.24E+01           15
   6    *CHVI      6.40 3.20E-01            4
   6    *PHHO     30.00 1.50E+00            7
    PER GRASS     88.50  4.42              20     45.49    2.27   0.51 218.43
   3    AGSM      40.20 2.01E+00 4.28E+01 20     33.19    1.66   0.83  1.5937E+02
   3    POFB      48.30 2.41E+00 5.14E+01 13     12.30    0.95   0.25  5.9061E+01
    PER FORBS      4.70  0.23               3      0.89    0.30   0.19    4.27
   2    AGGL       1.10 5.50E-02 1.17E+00  3
   2    MACA       2.00 1.00E-01 2.13E+00  3
   2    SPCO       1.40 7.00E-02 1.49E+00  2
   2    TRI        0.20 T        2.13E-01  1
    ANN FORBS      0.70  0.03               3      0.40    0.13   0.57    1.92
   4    CAMI       0.70 3.50E-02 7.45E-01  3
      TOTAL            19.16    100.00            4.6780E+01              2.2462E+02

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE

  PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS
```

ARTR		197.32
CHVI		1.04
PHHO		58.80
	Shrub Prod.	257.16
	Total	481.78

```
  PRECIPITATION DATA
   RAIN GUAGE NO.        MCGRAW FLATS          AUGUST 10/76
  OCT. 15 TO APR. 15 =      1.52
  APR. 15 TO JULY 1  =      3.50
  JULY 1 TO SEPT. 1  =      1.67
  SEPT. 1 TO OCT. 15 =      0.85
  SEASON TOTAL       =      7.54
  LONG TERM AVERAGE  =      9.86
```

**No utilization

```
10 42   NOV 11  RUNGMDA...
            1004    MCGRAW FLATS  EXCL    AUGUST 10/76  CUT     NATIVE

                              NUMBER PLOTS = 20
                                PLOT SIZE 1X1
PLANT   PLANT   TOTAL  AVE.     PERCENT  ABS.    TOTAL  AVE.    WGT./  LBS
CODE    NAME    TRANS  PER-     COMPO-   PLOT    WGT.   WGT.    UNIT   PER
                BASAL  CENT     SITION   FREQ.   GMS/20 /PLOT   BASAL  AC.
                AREA   BASAL             BASE    SQ.FT. OCCUR-  AREA
                PER-   AREA              20             RENCES
                CENT

  6    *ARTR   199.00 9.95E+00            14
  6    *CHVI     2.00 1.00E-01             1
  6    *PHHO    50.00 2.50E+00            10
   PER GRASS    91.30   4.56              20      34.90    1.74  0.38 167.58
  3    AGSM     35.00 1.75E+00 3.67E+01   20      20.25    1.01  0.58  9.7234E+01
  3    POFE     45.80 2.29E+00 4.81E+01    9       9.50    1.06  0.21  4.5616E+01
  3    POSE      6.50 3.25E-01 6.82E+00    8       2.41    0.30  0.37  1.1572E+01
  3    SIHY      4.00 2.00E-01 4.20E+00    2       2.74    1.37  0.68  1.3157E+01
   PER FORBS     1.90   0.09               2       0.46    0.23  0.24    2.21
  2    ACGL      0.20 T        2.10E-01    1
  2    ARHO      0.40 2.00E-02 4.20E-01    1
  2    ERPU      0.90 4.50E-02 9.44E-01    2
  2    SPCO      0.40 2.00E-02 4.20E-01    1
   ANN FORBS     2.10   0.10               6       0.33    0.05  0.16    1.58
  4    CAMI      2.10 1.05E-01 2.20E+00    6
     TOTAL           17.31     100.00            3.5690E+01            1.7137E+02

       * NOT COMPUTED IN PERCENT COMPOSITION
       T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

   ARTR                                                     110.50
   CHVI                                                       4.50
   LEPU                                                       1.90
   PHHO                                                      95.19
   XASA                                                       2.05
                                               Shrub Prod.  214.14
                                                     Total  385.51

PRECIPITATION DATA
 RAIN GUAGE NO.          MCGRAW FLATS  EXCL    AUGUST 10/76
OCT. 15 TO APR. 15 =   1.52
APR. 15 TO JULY 1  =   3.50
JULY 1 TO SEPT. 1  =   1.67
SEPT. 1 TO OCT. 15 =   0.85
SEASON TOTAL       =   7.54
LONG TERM AVERAGE  =   9.86

                                              Utilization   53.08
                                     Production Adjusted   438.59
```

```
        0920   MEDICI LODGE  EXCL   JULY   28/76  INSIDE SPRAY

                              NUMBER PLOTS = 20
                               PLOT SIZE 1X1
PLANT  PLANT   TOTAL  AVE.   PERCENT  ABS.   TOTAL  AVE.    WGT./  LBS
CODE   NAME    TRANS  PER-   COMPO-   PLOT   WGT.   WGT.    UNIT   PER
               BASAL  CENT   SITION   FREQ.  GMS/20 /PLOT   BASAL  AC.
               AREA   BASAL           BASE   SQ.FT. OCCUR-  AREA
               PER-   AREA            20            RENCES
               CENT

  6    *ARTR   179.00 8.95E+00           4
  6    *JUOS    52.00 2.60E+00           1
   PER GRASS    45.20  2.26             10     32.85   3.28  0.73 157.74
  3    AGSP     11.50 5.75E-01 1.64E+01  8      8.81   1.10  0.77  4.2303E+01
  3    FEID     29.40 1.47E+00 4.19E+01 10     21.75   2.17  0.74  1.0444E+02
  3    POFB      2.30 1.15E-01 3.28E+00  3      0.74   0.25  0.32  3.5533E+00
  3    STCO      2.00 1.00E-01 2.85E+00  1      1.55   1.55  0.77  7.4426E+00
   PER FORBS     4.00  0.20              2      3.68   1.84  0.92  17.67
  2    LOSI      4.00 2.00E-01 5.71E+00  2
   ANN GRASS     7.10  0.35              7      3.33   0.48  0.47  15.99
  5    BRTE      7.10 3.55E-01 1.01E+01  7
   ANN FORBS    13.80  0.69             15      3.02   0.20  0.22  14.50
  4    LEDE      6.80 3.40E-01 9.70E+00 14
  4    MIGR      3.70 1.85E-01 5.28E+00 15
  4    SED       3.30 1.65E-01 4.71E+00  4
     TOTAL             15.05    100.00         4.2880E+01              2.0590E+02

       * NOT COMPUTED IN PERCENT COMPOSITION
       T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

   NO SHRUB DATA COLLECTED


PRECIPITATION DATA
 RAIN GUAGE NO.         MEDICI LODGE  EXCL   JULY   28/76
OCT. 15 TO APR. 15 =   6.53
APR. 15 TO JULY 1  =   4.85
JULY 1 TO SEPT. 1  =   3.74
SEPT. 1 TO OCT. 15 =   2.46
SEASON TOTAL       =  17.58
LONG TERM AVERAGE  =  14.17

   **No utilization
```

```
         0920   MEDICI LODGE  EXCL   JULY   28/76  OUT    NATIVE

                          NUMBER PLOTS = 20
                            PLOT SIZE 1X1
 PLANT  PLANT  TOTAL  AVE.   PERCENT  ABS.   TOTAL   AVE.   WGT./  LBS
 CODE   NAME   TRANS  PER-   COMPO-   PLOT   WGT.    WGT.   UNIT   PER
               BASAL  CENT   SITION   FREQ.  GMS/20  /PLOT  BASAL  AC.
               AREA   BASAL           BASE   SQ.FT.  OCCUR- AREA
               PER-   AREA            20             RENCES
               CENT

   6   *ARTR     4.00 2.00E-01          2
   6   *CHVI     0.50 2.50E-02          1
   6   *OPPO     7.00 3.50E-01          1
  PER GRASS     21.20  1.06            13      6.18    0.48   0.29   29.67
   3   AGSP     13.20 6.60E-01 3.54E+01 13     4.75    0.37   0.36   2.2808E+01
   3   FEID      4.00 2.00E-01 1.07E+01  4     0.74    0.18   0.18   3.5533E+00
   3   POFE      4.00 2.00E-01 1.07E+01  9     0.69    0.08   0.17   3.3132E+00
  PER FORBS      0.70  0.03             1      0.03    0.03   0.04    0.14
   2   ERPU      0.70 3.50E-02 1.88E+00  1
  ANN FORBS     15.40  0.77            20      6.46    0.32   0.42   31.02
   4   LEDE     10.00 5.00E-01 2.68E+01 20
   4   SED       2.00 1.00E-01 5.36E+00  3
   4   UNK1      3.40 1.70E-01 9.12E+00 14
     TOTAL            2.44    100.00        1.2670E+01               6.0837E+01

       * NOT COMPUTED IN PERCENT COMPOSITION
       T - TRACE

 PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

    NO SHRUB DATA COLLECTED


 PRECIPITATION DATA
  RAIN GUAGE NO.        MEDICI LODGE  EXCL   JULY   28/76
 OCT. 15 TO APR. 15 =   6.53
 APR. 15 TO JULY 1  =   4.85
 JULY 1 TO SEPT. 1  =   3.74
 SEPT. 1 TO OCT. 15 =   2.46
 SEASON TOTAL       =  17.58
 LONG TERM AVERAGE  =  14.17
                                         Utilization   6.59
                                   Adjusted Production 67.43
```

```
            2301   MESA   ANTELO EXCL   AUGUST 03/76  INSIDE NATIVE

                              NUMBER PLOTS = 20
                                PLOT SIZE 1X1
PLANT  PLANT  TOTAL  AVE.   PERCENT  ABS.   TOTAL   AVE.    WGT./  LBS
CODE   NAME   TRANS  PER-   COMPO-   PLOT   WGT.    WGT.    UNIT   PER
              BASAL  CENT   SITION   FREQ.  GMS/20  /PLOT   BASAL  AC.
              AREA   BASAL           BASE   SQ.FT.  OCCUR-  AREA
              PER-   AREA            20             RENCES
              CENT

  6   *ARHO     0.60 3.00E-02            2
  6   *ARTR   404.00 2.02E+01           17
  6   *CHVI    16.00 8.00E-01            5
  6   *OPPO     2.00 1.00E-01            1
  6   *PHHO    39.00 1.95E+00            5
   PER GRASS   65.30  3.26              18    23.09    1.28  0.35 110.87
  3    AGSM    20.30 1.01E+00 3.05E+01 18    10.71    0.59  0.53  5.1426E+01
  3    CAEL     0.50 2.50E-02 7.52E-01  1     0.06    0.06  0.12  2.8810E-01
  3    POSE    43.00 2.15E+00 6.47E+01 13    11.95    0.92  0.28  5.7380E+01
  3    SIHY     1.50 7.50E-02 2.26E+00  2     0.37    0.18  0.25  1.7766E+00
   ANN FORBS    1.20  0.06               2     0.08    0.04  0.07   0.38
  4    ERCE     1.20 6.00E-02 1.80E+00  2
     TOTAL          26.40   100.00          2.3490E+01             1.1126E+02

       * NOT COMPUTED IN PERCENT COMPOSITION
       T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS
   ARTR                                                     209.57
   CELA                                                       0.53
   CHVI                                                      23.54
   EROV                                                       1.29
   LEPU                                                       0.82
   PHHO                                                      79.52
                                              Shrub Prod.   315.27
                                                 Total      426.53

PRECIPITATION DATA
  RAIN GUAGE NO.        MESA   ANTELO EXCL   AUGUST 03/76
OCT. 15 TO APR. 15 =    LR
APR. 15 TO JULY 1  =   4.07
JULY 1 TO SEPT. 1  =   2.34
SEPT. 1 TO OCT. 15 =   0.81
SEASON TOTAL       =    --
LONG TERM AVERAGE  =   7.79

   **No utilization
```

```
           2301   MESE   ANTELO EXCL   AUGUST 03/76  OUT    NATIVE

                            NUMBER PLOTS = 20
                              PLOT SIZE 1X1
PLANT  PLANT   TOTAL  AVE.    PERCENT  ABS.   TOTAL   AVE.    WGT./  LBS
CODE   NAME    TRANS  PER-    COMPO-   PLOT   WGT.    WGT.    UNIT   PER
               BASAL  CENT    SITICN   FREQ.  GMS/20  /PLOT   BASAL  AC.
               AREA   BASAL            BASE   SQ.FT.  OCCUR-  AREA
               PER-   AREA             20             RENCES
               CENT

  6   *ARTR   231.00 1.15E+01            15
  6   *CELA     4.00 2.00E-01             2
  6   *CHVI    39.00 1.95E+00             4
  6   *PHHO    26.00 1.30E+00             7
   PER GRASS   46.00  2.30               20    14.28   0.71   0.31   68.57
  3    AGSM    35.30 1.76E+00 7.10E+01 20    13.04   0.65   0.37   6.2614E+01
  3    POSE     9.50 4.75E-01 1.91E+01  7     0.94   0.13   0.10   4.5136E+00
  3    SIHY     0.20 T        4.02E-01  1     0.08   0.08   0.40   3.8414E-01
  3    STCO     1.00 5.00E-02 2.01E+00  1     0.22   0.22   0.22   1.0564E+00
   PER FORBS    0.60  0.03              2     0.03   0.01   0.05    0.14
  2    MACA     0.60 3.00E-02 1.21E+00  2
   ANN FORBS    3.10  0.15              7     0.82   0.12   0.26    3.94
  4    ERCB     3.00 1.50E-01 6.04E+00  7
  4    CHFR     0.10 T        2.01E-01  1
     TOTAL           17.48    100.00         1.5130E+01            7.2650E+01

      * NOT COMPUTED IN PERCENT COMPOSITION
      T - TRACE

 PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS
    ARTR                                                  157.18
    CELA                                                    1.20
    CHVI                                                   18.96
    EROV                                                    1.29
    OPPO                                                    1.64
    PHHO                                                   83.13
                                         Shrub Prod.      263.40
                                           Total          336.05

 PRECIPITATION DATA
  RAIN GUAGE NO.         MESE    ANTELO EXCL    AUGUST 03/76
 OCT. 15 TO APR. 15 =     LR
 APR. 15 TO JULY 1  =    4.07
 JULY 1 TO SEPT. 1  =    2.34
 SEPT. 1 TO OCT. 15 =    0.81
 SEASON TOTAL       =     --
 LONG TERM AVERAGE  =    7.79

                                     Utilization      26.83
                            Adjusted Production      362.88
```

```
         1503   NORTH  BUTTE  EXCL    JULY   27/76  INSIDE RELIC

                              NUMBER PLOTS = 20
                                PLOT SIZE 1X1
  PLANT   PLANT   TOTAL   AVE.    PERCENT   ABS.   TOTAL   AVE.    WGT./   LBS
  CODE    NAME    TRANS   PER-    COMPO-    PLOT   WGT.    WGT.    UNIT    PER
                  BASAL   CENT    SITICN    FREQ.  GMS/20  /PLOT   BASAL   AC.
                  AREA    BASAL             BASE   SQ.FT.  OCCUR-  AREA
                  PER-    AREA              20             RENCES
                  CENT

   6    *ARTR   176.00  8.80E+00               9
   6    *PHHO     9.00  4.50E-01               3
    PER GRASS   147.10    7.35                17    64.34    3.78   0.44  308.94
   3     AGSP    69.80  3.49E+00  4.54E+01    17    45.59    2.68   0.65   2.1891E+02
   3     BOGR     5.00  2.50E-01  3.25E+00     1     1.84    1.84   0.37   8.8351E+00
   3     CAFI    58.00  2.90E+00  3.77E+01    11    11.93    1.08   0.21   5.7284E+01
   3     POSB    14.30  7.15E-01  9.30E+00    12     4.98    0.41   0.35   2.3912E+01
    PER FORBS     6.70    0.33                 2     2.54    1.27   0.38  12.20
   2     ALTE     0.20  T         1.30E-01     1
   2     AST      6.00  3.00E-01  3.90E+00     2
   2     SPCO     0.50  2.50E-02  3.25E-01     1
      TOTAL             16.94     100.00           6.6880E+01              3.2114E+02

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE
```

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR		82.86
OPPO		4.60
PHHO		1.27
	Shrub Prod.	88.73
	Total	409.87

```
PRECIPITATION DATA
 RAIN GUAGE NO.        NORTH  BUTTE  EXCL    JULY   27/76
OCT. 15 TO APR. 15 =   3.09
APR. 15 TO JULY 1  =  E5.35
JULY 1 TO SEPT. 1  =   2.36
SEPT. 1 TO OCT. 15 =   2.27
SEASON TOTAL       =  13.07
LONG TERM AVERAGE  =  11.13
```

**No utilization

```
      1504    ROUND   TOP     EXCL    JULY   27/76  INSIDE RELIC

                        NUMBER PLOTS = 20
                          PLOT SIZE 1X1
 PLANT   PLANT   TOTAL  AVE.    PERCENT  ABS.    TOTAL   AVE.   WGT./  LBS
 CODE    NAME    TRANS  PER-    COMPO-   PLOT    WGT.    WGT.   UNIT   PER
                 BASAL  CENT    SITICN   FREQ.   GMS/20  /PLCT  BASAL  AC.
                 AREA   BASAL            BASE    SQ.FT.  OCCUR- AREA
                 PER-   AREA             20              RENCES
                 CENT

  6    *ARTR    14.00 7.00E-01              1
  6    *CHVI    36.00 1.80E+00              2
   PER GRASS   213.00 10.65                15    125.61     8.37  0.59 603.14
  3    AGSP    149.30 7.46E+00 6.29E+01 15     88.50     5.90  0.59  4.2495E+02
  3    CAFI     31.70 1.58E+00 1.34E+01 13     13.45     1.03  0.42  6.4583E+01
  3    KOCR      1.50 7.50E-02 6.32E-01  1      1.03     1.03  0.69  4.9457E+00
  3    POSE     29.50 1.47E+00 1.24E+01 12     21.54     1.79  0.73  1.0343E+02
  3    STCO      1.00 5.00E-02 4.21E-01  1      1.09     1.09  1.09  5.2338E+00
   PER FORBS    21.40  1.07                 5     12.43     2.49  0.58  59.69
  2    ALTE      0.40 2.00E-02 1.68E-01  2
  2    GACO      0.50 2.50E-02 2.11E-01  1
  2    MUDI     20.50 1.02E+00 8.64E+00  5
   ANN GRASS     2.60  0.13                 4      1.42     0.35  0.55   6.82
  5    BRTE      2.60 1.30E-01 1.10E+00  4
   ANN FORBS     0.40  0.02                 2      0.03     0.01  0.07   0.14
  4    LEDE      0.40 2.30E-02 1.68E-01  2
     TOTAL           14.37    100.00         1.3949E+02              6.6979E+02

         * NOT COMPUTED IN PERCENT COMPOSITION
         T - TRACE
```

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR		23.75
XASA		43.67
	Shrub Prod.	67.42
	Total	737.21

```
PRECIPITATION DATA
 RAIN GUAGE NO.          ROUND  TOP     EXCL     JULY     27/76
OCT. 15 TO APR. 15 =     E3.50
APR. 15 TO JULY 1  =     E5.35
JULY 1 TO SEPT. 1  =      2.36
SEPT. 1 TO OCT. 15 =      2.68
SEASON TOTAL       =    E13.89
LONG TERM AVERAGE  =     12.04
```

**No utilization

```
          1505    SAND    GULCH   EXCL     JULY     22/76   INSIDE NATIVE

                                    NUMBER OF PLOTS
                              COVER = 200, PRODUCTION = 20
                               PLOT SIZE 1 FT. X 10 FT.
PLANT    PLANT    TOTAL    AVE.     PERCENT    ABS.     TOTAL    AVE.     WGT./    LBS
CODE     NAME     TRANS    PER-     COMPO-     PLOT     WGT.     WGT.     UNIT     PER
                  BASAL    CENT     SITION     FREQ.    GMS/     /PLOT    BASAL    AC.
                  AREA     BASAL               BASE     200      OCCUR-   AREA
                  PER-     AREA                200      SQ.FT.   RENCES
                  CENT

  1  ATGA      1353.2  6.77E+00 6.24E+01 97    532.34     5.49  0.39  2.5561E+02
  6  *OPPO      113.0  5.65E-01          16
   PER GRASS    362.9  1.81E+00          98    380.57     3.88  1.05  1.8274E+02
  3  AGCR        19.0  9.50E-02 8.77E-01  3     43.09    14.36  2.27  2.0690E+01
  3  AGSM       205.7  1.03E+00 9.49E+00 98    222.89     2.27  1.08  1.0702E+02
  3  AGSP        84.3  4.21E-01 3.89E+00 37     75.46     2.04  0.90  3.6234E+01
  3  BOGR         5.0  2.50E-02 2.31E-01  2      4.27     2.13  0.85  2.0503E+00
  3  CRHY         6.2  3.10E-02 2.86E-01  4      6.42     1.60  1.04  3.0827E+00
  3  POSE        38.7  1.93E-01 1.79E+00 28     14.23     0.51  0.37  6.8328E+00
  3  SIHY         4.0  2.00E-02 1.85E-01  2     14.21     7.10  3.55  6.8232E+00
  ANN GRASS    416.90   2.08            177    346.09     1.96  0.83 166.18
  5  BRTE       416.9  2.08E+00 1.92E+01177
  ANN FORBS     34.50   0.17             67     12.48     0.19  0.36    5.99
  4  CEPI         0.6  T        2.77E-02  3
  4  LEPE        33.6  1.68E-01 1.55E+00 67
  4  PLSP         0.3  T        1.38E-02  2
     TOTAL              11.4    100.00          1.27148E+03             6.10526E+02

          * NOT COMPUTED IN PERCENT COMPOSITION
          T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS
```

OPPO

	8.94
Shrub Prod.	8.94
Total	619.47

```
PRECIPITATION DATA
 RAIN GUAGE NO.           SAND    GULCH   EXCL     JULY     22/76
OCT. 15 TO APR. 15 =    2.68
APR. 15 TO JULY 1  =    3.29
JULY 1 TO SEPT. 1  =    1.10
SEPT. 1 TO OCT. 15 =    1.88
SEASON TOTAL       =    8.95
LONG TERM AVERAGE  =    8.89
```

**No utilization

```
        1505   SAND   GULCH  EXCL   JULY   22/76  OUT    NATIVE

                          NUMBER OF PLOTS
                     COVER = 200, PRODUCTION = 20
                      PLOT SIZE 1 FT. X 10 FT.
PLANT  PLANT  TOTAL  AVE.   PERCENT  ABS.   TOTAL  AVE.    WGT./  LBS
CODE   NAME   TRANS  PER-   COMPO-   PLOT   WGT.   WGT.    UNIT   PER
              BASAL  CENT   SITION   FREQ.  GMS/   /PLOT   BASAL  AC.
              AREA   BASAL           BASE   200    OCCUR-  AREA
              PER-   AREA            200    SQ.FT. RENCES
              CENT

  1  ATGA    1283.7  6.42E+00 5.03E+01132   494.91    3.75  0.39  2.3764E+02
  6  *CFPO    144.0  7.20E-01         19
   PER GRASS *****   5.04E+00        149    351.67    2.36  0.35  1.6886E+02
  3  AGSM     587.8  2.94E+00 2.30E+01149   208.00    1.40  0.35  9.9875E+01
  3  AGSP      69.3  3.46E-01 2.71E+00 23    51.89    2.26  0.75  2.4916E+01
  3  BOGR     110.0  5.50E-01 4.31E+00 21    35.76    1.70  0.33  1.7171E+01
  3  CRHY      26.3  1.31E-01 1.03E+00  5    18.23    3.65  0.69  8.7535E+00
  3  PCSE     208.7  1.04E+00 8.17E+00 71    33.25    0.47  0.16  1.5966E+01
  3  SIHY       6.0  3.00E-02 2.35E-01  2     4.54    2.27  0.76  2.1800E+00
   ANN GRASS  256.20  1.28           171   172.65    1.01  0.67  82.90
  5  BRTE     256.2  1.28E+00 1.00E+01171
   ANN FORBS    5.30  0.03            17    51.27    3.02  9.67  24.62
  4  LEPE       4.1  2.05E-02 1.61E-01 17
  4  MATA       0.1  T        T         1
  4  PLSP       1.1  T        4.31E-02  5
     TOTAL            13.5     100.00      1.07050E+03           5.14021E+02

       * NOT COMPUTED IN PERCENT COMPOSITION
       T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS
```

OPPO 2.02

Shrub Prod. 2.02

Total 516.04

```
PRECIPITATION DATA
 RAIN GUAGE NO.        SAND    GULCH   EXCL    JULY    22/76
OCT. 15 TO APR. 15 =    2.68
APR. 15 TO JULY 1  =    3.29
JULY 1 TO SEPT. 1  =    1.10
SEPT. 1 TO OCT. 15 =    1.88
SEASON TOTAL       =    8.95
LONG TERM AVERAGE  =    8.89
```

Utilization 29.51

Adjusted Production 545.55

1039 SHOSHO ANT NO EXCL 2 AUG 17/76 INSIDE NATIVE

NUMBER PLOTS = 20
PLOT SIZE 1X1

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER-CENT	AVE. PER-CENT BASAL AREA	PERCENT COMPO-SITION	ABS. PLOT FREQ. BASE 20	TOTAL WGT. GMS/20 SQ.FT.	AVE. WGT. /PLOT OCCUR-RENCES	WGT./ UNIT BASAL AREA	LBS PER AC.
6	*ARTR	72.80	3.64E+00		6				
6	*OPPO	50.00	2.50E+00		7				
PER GRASS		128.20	6.41		14	25.34	1.81	0.20	121.67
3	AGSM	1.20	6.00E-02	9.36E-01	2	1.38	0.69	1.15	6.6263E+00
3	BOGR	111.70	5.58E+00	8.71E+01	14	18.15	1.30	0.16	8.7151E+01
3	POSE	5.30	2.65E-01	4.13E+00	6	1.61	0.27	0.30	7.7307E+00
3	SIHY	3.00	1.50E-01	2.34E+00	2	1.65	0.82	0.55	7.9228E+00
3	STCO	7.00	3.50E-01	5.46E+00	2	2.55	1.27	0.36	1.2244E+01
TOTAL			12.55	100.00		2.5340E+01			1.2167E+02

* NOT COMPUTED IN PERCENT COMPOSITION
T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR	98.25
OPPO	19.63
PHHO	5.09
Shrub Prod.	122.97
Total	244.64

PRECIPITATION DATA
RAIN GUAGE NO. SHOSHO ANT NO EXCL 2 AUG 17/76

OCT. 15 TO APR. 15 =	1.96
APR. 15 TO JULY 1 =	NR
JULY 1 TO SEPT. 1 =	5.17
SEPT. 1 TO OCT. 15 =	1.40
SEASON TOTAL =	8.53
LONG TERM AVERAGE =	8.83

**No utilization

```
          1009   SHOSHO ANT SO EXCL 2 AUG    17/76  INSIDE NATIVE          406

                              NUMBER PLOTS = 20
                                PLOT SIZE 1X1
PLANT  PLANT   TOTAL  AVE.    PERCENT   ABS.   TOTAL  AVE.    WGT./  LBS
CODE   NAME    TRANS  PER-    COMPO-    PLOT   WGT.   WGT.    UNIT   PER
               BASAL  CENT    SITION    FREQ.  GMS/20 /PLOT   BASAL  AC.
               AREA   BASAL             BASE   SQ.FT. OCCUR-  AREA
               PER-   AREA              20            RENCES
               CENT

  6    *ARTR   189.40 9.47E+00           11
  6    *OPPO    23.00 1.15E+00            3
   PER GRASS    52.40  2.62              11     16.46   1.50   0.31  79.04
  3     AGSM     7.30 3.65E-01 1.37E+01  10      5.65   0.56   0.77  2.7130E+01
  3     BOGR    34.80 1.74E+00 6.52E+01  11      7.01   0.64   0.20  3.3660E+01
  3     POSE     2.50 1.25E-01 4.68E+00   4      1.06   0.26   0.42  5.0898E+00
  3     STCO     7.80 3.90E-01 1.46E+01   9      2.74   0.30   0.35  1.3157E+01
   PER FORBS     1.00  0.05               4      0.34   0.08   0.34   1.63
  2     SPCO     1.00 5.00E-02 1.87E+00   4
    TOTAL             13.29    100.00          1.6800E+01            8.0668E+01

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS
```

ARTR		98.25
OPPO		19.63
PHHO		5.09
	Shrub Prod.	122.97
	Total	203.64

```
PRECIPITATION DATA
 RAIN GUAGE NO.        SHOSHO ANT SO EXCL 2 AUG    17/76
OCT. 15 TO APR. 15 =   1.96
APR. 15 TO JULY 1  =   NR
JULY 1 TO SEPT. 1  =   5.17
SEPT. 1 TO OCT. 15 =   1.40
SEASON TOTAL       =   8.53
LONG TERM AVERAGE  =   8.83
```

**No utilization

```
           1009   SHOSHO ANT    EXCL 2 AUG    17/76  CUT    NATIVE

                              NUMBER PLOTS = 20
                                PLOT SIZE 1X1
PLANT  PLANT   TOTAL  AVE.   PERCENT  ABS.    TOTAL  AVE.    WGT./  LBS
CODE   NAME    TRANS  PER-   COMPO-   PLOT    WGT.   WGT.    UNIT   PER
               BASAL  CENT   SITION   FREQ.   GMS/20 /PLOT   BASAL  AC.
               AREA   BASAL           BASE    SQ.FT. OCCUR-  AREA
               PER-   AREA            20             RENCES
               CENT

  6    *ARTR   182.00 9.10E+00           9
  6    *OPPO    14.00 7.00E-01           3
  6    *PHHO     3.00 1.50E-01           1
   PER GRASS    62.40  3.12             17     66.08    3.89  1.06 317.30
  3    AGSM     14.90 7.45E-01 2.31E+01 17     29.05    1.71  1.95  1.3949E+02
  3    BOGR     38.00 1.90E+00 5.89E+01  9     17.85    1.98  0.47  8.5710E+01
  3    POSB      8.50 4.25E-01 1.32E+01 13     17.89    1.38  2.10  8.5902E+01
  3    STCO      1.00 5.00E-02 1.55E+00  1      1.29    1.29  1.29  6.1942E+00
   PER FORBS     2.10  0.10              5      5.50    1.10  2.62  26.41
  2    SPCO      2.10 1.05E-01 3.26E+00  5
      TOTAL           13.17    100.00          7.1580E+01           3.4371E+02

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

    ARTR                                                  74.06
    OPPO                                                  21.83
    PHHO                                                   2.07
                                             Shrub Prod.  97.46
                                                   Total 441.17

PRECIPITATION DATA
 RAIN GUAGE NO.          SHOSHO ANT    EXCL 2 AUG    17/76
OCT. 15 TO APR. 15 =     1.96
APR. 15 TO JULY 1  =     NR
JULY 1 TO SEPT. 1  =     5.17
SEPT. 1 TO OCT. 15 =     1.40
SEASON TOTAL       =     8.53
LONG TERM AVERAGE  =     8.83

                                             Utilization  15.50
                                    Adjusted Production  456.67
```

1011 SHOSHO ANT NO EXCL 4 AUGUST 17/76 INSIDE NATIVE

NUMBER PLOTS = 20
PLOT SIZE 1X1

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER- CENT	AVE. PER- CENT BASAL AREA	PERCENT COMPO- SITION	ABS. PLOT FREQ. BASE 20	TOTAL WGT. GMS/20 SQ.FT.	AVE. WGT. /PLOT OCCUR- RENCES	WGT./ UNIT BASAL AREA	LBS PER AC.
6	*ARTR	167.00	8.35E+00		11				
6	*OPPO	11.00	5.50E-01		3				
	PER GRASS	80.20	4.01		12	18.87	1.57	0.24	90.61
3	AGSM	5.40	2.70E-01	6.65E+00	12	1.66	0.14	0.31	7.9708E+00
3	BOGR	64.50	3.22E+00	7.94E+01	9	12.34	1.37	0.19	5.9253E+01
3	ORHY	4.00	2.00E-01	4.93E+00	2	2.62	1.31	0.65	1.2580E+01
3	POSE	4.80	2.40E-01	5.91E+00	6	2.00	0.33	0.42	9.6034E+00
3	STCO	1.50	7.50E-02	1.85E+00	2	0.25	0.12	0.17	1.2004E+00
	PER FORBS	1.00	0.05		2	0.33	0.16	0.33	1.58
2	SPCO	1.00	5.00E-02	1.23E+00	2				
	TOTAL		12.96	100.00		1.9200E+01			9.2193E+01

* NOT COMPUTED IN PERCENT COMPOSITION
T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR		141.27
OPPO		45.21
	Shrub Prod.	186.48
	Total	278.67

PRECIPITATION DATA
RAIN GUAGE NO. SHOSHO ANT NO EXCL 4 AUGUST 17/76

OCT. 15 TO APR. 15	=	1.97
APR. 15 TO JULY 1	=	NR
JULY 1 TO SEPT. 1	=	5.89
SEPT. 1 TO OCT. 15	=	1.44
SEASON TOTAL	=	9.30
LONG TERM AVERAGE	=	8.44

**No utilization

1011 SHOSHO ANT SO EXCL 4 AUGUST 17/76 INSIDE NATIVE

NUMBER PLOTS = 20
PLOT SIZE 1X1

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER-CENT	AVE. PER-CENT BASAL AREA	PERCENT COMPO-SITION	ABS. PLOT FREQ. BASE 20	TOTAL WGT. GMS/20 SQ.FT.	AVE. WGT. /PLOT OCCUR-RENCES	WGT./ UNIT BASAL AREA	LBS PER AC.
6	*ARTR	53.80	2.69E+00		6				
6	*OPPO	23.00	1.15E+00		4				
PER GRASS		194.20	9.71		12	36.38	3.03	0.19	174.69
3	AGSM	2.70	1.35E-01	1.39E+00	8	1.03	0.13	0.38	4.9457E+00
3	BOGR	163.00	8.15E+00	8.37E+01	12	25.55	2.13	0.16	1.2268E+02
3	ORHY	3.00	1.50E-01	1.54E+00	2	0.90	0.45	0.30	4.3215E+00
3	POSE	4.50	2.25E-01	2.31E+00	4	0.83	0.21	0.18	3.9854E+00
3	STCO	21.00	1.05E+00	1.08E+01	3	8.07	2.69	0.38	3.8750E+01
PER FORBS		0.50	0.02		2	8.07	4.03	16.14	38.75
2	SPCO	0.50	2.50E-02	2.57E-01	2				
TOTAL			13.57	100.00		4.4450E+01			2.1344E+02

* NOT COMPUTED IN PERCENT COMPOSITION
T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR		141.27
OPPO		45.21
	Shrub Prod.	186.48
	Total	399.92

PRECIPITATION DATA
RAIN GUAGE NO. SHOSHO ANT SO EXCL 4 AUGUST 17/76
OCT. 15 TO APR. 15 = 1.97
APR. 15 TO JULY 1 = NR
JULY 1 TO SEPT. 1 = 5.89
SEPT. 1 TO OCT. 15 = 1.44
SEASON TOTAL = 9.30
LONG TERM AVERAGE = 8.44

**No utilization

```
          1011   SHOSHO ANT    EXCL 4 AUGUST 17/76  CUT    NATIVE

                          NUMBER PLOTS = 20
                           PLOT SIZE 1X1
 PLANT  PLANT  TOTAL  AVE.   PERCENT  ABS.   TOTAL   AVE.    WGT./  LBS
 CODE   NAME   TRANS  PER-   COMPO-   PLOT   WGT.    WGT.    UNIT   PER
               BASAL  CENT   SITION   FREQ.  GMS/20  /PLOT   BASAL  AC.
               AREA   BASAL           BASE   SQ.FT.  OCCUR-  AREA
               PER-   AREA            20             RENCES
               CENT

  6    *ARTR   140.00 7.00E+00           16
  6    *OPPO    23.00 1.15E+00            5
   PER GRASS    98.90  4.94              11    13.52    1.23  0.14  64.92
  3    AGSM      0.10 T          9.80E-02  1     0.06    0.06  0.60  2.8810E-01
  3    BOGR     86.20 4.31E+00 8.45E+01 11    10.81    0.98  0.13  5.1906E+01
  3    POSE      4.70 2.35E-01 4.61E+00  6     1.28    0.21  0.27  6.1462E+00
  3    STCO      7.90 3.95E-01 7.75E+00  6     1.37    0.23  0.17  6.5783E+00
   PER FORBS     3.10  0.15               6     0.41    0.07  0.13   1.97
  2    SPCO      3.10 1.55E-01 3.04E+00  6
     TOTAL          13.25     100.00         1.3930E+01             6.6888E+01

       * NOT COMPUTED IN PERCENT COMPOSITION
       T - TRACE

 PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

    ARTR                                                 114.18
    OPPO                                                  53.44
                                          Shrub Prod.    167.62
                                                Total    234.51


 PRECIPITATION DATA
  RAIN GUAGE NO.        SHOSHO ANT     EXCL 4 AUGUST 17/76
 OCT. 15 TO APR. 15 =    1.97
 APR. 15 TO JULY 1  =    NR
 JULY 1 TO SEPT. 1  =    5.89
 SEPT. 1 TO OCT. 15 =    1.44
 SEASON TOTAL       =    9.30
 LONG TERM AVERAGE  =    8.44

    **No utilization
```

1003 SHOSHO ANT NO EXCL 7 AUGUST 17/76 INSIDE NATIVE

NUMBER PLOTS = 20
PLOT SIZE 1X1

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER-CENT	AVE. PER-CENT BASAL AREA	PERCENT COMPO-SITICN	ABS. PLOT FREQ. BASE 20	TOTAL WGT. GMS/20 SQ.FT.	AVE. WGT. /PLOT OCCUR-RENCES	WGT./ UNIT BASAL AREA	LBS PER AC.
6	*ARTR	168.00	8.40E+00		7				
6	*OPPO	83.00	4.15E+00		10				
	PER GRASS	24.90	1.24		16	9.77	0.61	0.39	46.91
3	AGSM	6.60	3.30E-01	2.59E+01	16	3.95	0.25	0.60	1.8967E+01
3	BOGR	1.90	9.50E-02	7.45E+00	4	2.30	0.57	1.21	1.1044E+01
3	POSE	8.40	4.20E-01	3.29E+01	9	1.56	0.17	0.19	7.4906E+00
3	STCO	8.00	4.00E-01	3.14E+01	3	1.96	0.65	0.24	9.4113E+00
	PER FORBS	0.60	0.03		2	0.15	0.07	0.25	0.72
2	SPCO	0.60	3.00E-02	2.35E+00	2				
	TOTAL		13.82	100.00		9.9200E+00			4.7633E+01

* NOT COMPUTED IN PERCENT COMPOSITION
T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR	204.25
OPPO	20.89
PHHO	1.49
Shrub Prod.	226.63
Total	274.26

PRECIPITATION DATA
RAIN GUAGE NO. SHOSHO ANT NO EXCL 7 AUGUST 17/76
OCT. 15 TO APR. 15 = 1.80
APR. 15 TO JULY 1 = NR
JULY 1 TO SEPT. 1 = E5.50
SEPT. 1 TO OCT. 15 = 1.62
SEASON TOTAL = E8.92
LONG TERM AVERAGE = 8.87

**No utilization

1003 SHOSHO ANT SO EXCL 7 AUGUST 17/76 INSIDE NATIVE

NUMBER PLOTS = 20
PLOT SIZE 1X1

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER- CENT	AVE. PER- CENT BASAL AREA	PERCENT COMPO- SITION	ABS. PLOT FREQ. BASE 20	TOTAL WGT. GMS/20 SQ.FT.	AVE. WGT. /PLOT OCCUR- RENCES	WGT./ UNIT BASAL AREA	LBS PER AC.
6	*ARTR	174.00	8.70E+00		11				
6	*PHHO	7.50	3.75E-01		3				
	PER GRASS	49.60	2.48		18	15.48	0.86	0.31	74.33
3	AGSM	13.70	6.85E-01	2.74E+01	18	7.66	0.43	0.56	3.6781E+01
3	POGR	20.80	1.04E+00	4.16E+01	5	3.10	0.62	0.15	1.4885E+01
3	POSE	5.60	2.80E-01	1.12E+01	9	1.18	0.13	0.21	5.6660E+00
3	STCO	9.50	4.75E-01	1.90E+01	6	3.54	0.59	0.37	1.6998E+01
	PER FORBS	0.40	0.02		2	0.01	0.00	0.02	0.05
2	SPCO	0.40	2.00E-02	8.00E-01	2				
	TOTAL		11.57	100.00		1.5490E+01			7.4378E+01

* NOT COMPUTED IN PERCENT COMPOSITION
T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR	204.25
OPPO	20.89
PHHO	1.44
Shrub Prod.	226.63
Total	301.01

PRECIPITATION DATA

RAIN GUAGE NO. SHOSHO ANT SO EXCL 7 AUGUST 17/76
OCT. 15 TO APR. 15 = 1.80
APR. 15 TO JULY 1 = NR
JULY 1 TO SEPT. 1 = E5.50
SEPT. 1 TO OCT. 15 = 1.62
SEASON TOTAL = E8.92
LONG TERM AVERAGE = 8.87

**No utilization

```
        1003   SHOSHO ANT     EXCL 7 AUGUST 17/76   CUT     NATIVE       413

                              NUMBER PLOTS = 20
                                PLOT SIZE 1X1
PLANT   PLANT   TOTAL   AVE.    PERCENT   ABS.    TOTAL    AVE.     WGT./   LBS
CODE    NAME    TRANS   PER-    COMPO-    PLOT    WGT.     WGT.     UNIT    PER
                BASAL   CENT    SITION    FREQ.   GMS/20   /PLOT    BASAL   AC.
                AREA    BASAL             BASE    SQ.FT.   OCCUR-   AREA
                PER-    AREA              20               RENCES
                CENT

  6    *ARTR     60.00 3.00E+00             6
  6    *OPPO     23.00 1.15E+00             2
   PER GRASS    119.40  5.97               17      25.37    1.49    0.21 121.82
  3     AGSM     13.40 6.70E-01 1.10E+01 17       7.19    0.42    0.54  3.4524E+01
  3     BOGR     94.50 4.72E+00 7.73E+01 12      12.34    1.03    0.13  5.9253E+01
  3     POSE      4.30 2.15E-01 3.52E+00  9       2.67    0.30    0.62  1.2821E+01
  3     STCO      7.20 3.60E-01 5.89E+00  4       3.17    0.79    0.44  1.5221E+01
   PER FORBS      2.80  0.14                5       1.17    0.23    0.42    5.62
  2     SPCO      2.80 1.40E-01 2.29E+00  5
      TOTAL            10.26    100.00           2.6540E+01                1.2744E+02

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

    ARTR                                                         92.85
    OPPO                                                         48.31
                                                  Shrub Prod.   141.16
                                                        Total   268.60

PRECIPITATION DATA
  RAIN GUAGE NO.          SHOSHO ANT     EXCL 7 AUGUST 17/76
OCT. 15 TO APR. 15 =     1.80
APR. 15 TO JULY 1  =     NR
JULY 1 TO SEPT. 1  =    E5.50
SEPT. 1 TO OCT. 15 =     1.62
SEASON TOTAL       =    E8.92
LONG TERM AVERAGE  =     8.87

                                                  Utilization    10.36
                                          Adjusted Production   278.96
```

1014 SHOSHO ANT NO EXCL 8 AUG 17/76 INSIDE NATIVE

NUMBER PLOTS = 20
PLOT SIZE 1X1

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER-CENT	AVE. PER-CENT BASAL AREA	PERCENT COMPO-SITION	ABS. PLOT FREQ. BASE 20	TOTAL WGT. GMS/20 SQ.FT.	AVE. WGT. /PLCT OCCUR-RENCES	WGT./ UNIT BASAL AREA	LBS PER AC.
6	*ARTR	49.80	2.49E+00		6				
6	*OPPO	38.00	1.90E+00		8				
6	*PHHO	2.00	1.00E-01		1				
	PER GRASS	54.70	2.73		16	25.91	1.62	0.47	124.41
3	AGSM	25.00	1.25E+00	4.53E+01	16	17.71	1.11	0.71	8.5038E+01
3	BOGR	18.60	9.30E-01	3.37E+01	7	3.67	0.52	0.20	1.7622E+01
3	POSB	6.90	3.45E-01	1.25E+01	9	1.68	0.19	0.24	8.0668E+00
3	STCO	4.20	2.10E-01	7.61E+00	5	2.85	0.57	0.68	1.3685E+01
	PER FORBS	0.50	0.02		1	0.06	0.06	0.12	0.29
2	SPCO	0.50	2.50E-02	9.06E-01	1				
	TOTAL		7.25	100.00		2.5970E+01			1.2470E+02

* NOT COMPUTED IN PERCENT COMPOSITION
T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR	83.01
OPPO	42.30
Shrub Prod.	125.31
Total	250.01

PRECIPITATION DATA
RAIN GUAGE NO. SHOSHO ANT NO EXCL 8 AUG 17/76

OCT. 15 TO APR. 15 =	2.06
APR. 15 TO JULY 1 =	NR
JULY 1 TO SEPT. 1 =	6.06
SEPT. 1 TO OCT. 15 =	1.68
SEASON TOTAL =	9.80
LONG TERM AVERAGE =	8.70

**No utilization

1014 SHOSHO ANT SO EXCL 8 AUG 17/76 INSIDE NATIVE

NUMBER PLOTS = 20
PLOT SIZE 1X1

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER-CENT	AVE. PER-CENT BASAL AREA	PERCENT COMPO-SITION	ABS. PLOT FREQ. BASE 20	TOTAL WGT. GMS/20 SQ.FT.	AVE. WGT. /PLOT OCCUR-RENCES	WGT./ UNIT BASAL AREA	LBS PER AC.
6	*ARTR	2.00	1.00E-01		2				
6	*OPPO	36.00	1.80E+00		5				
	PER GRASS	128.60	6.43		14	37.88	2.71	0.29	181.89
3	AGSM	7.10	3.55E-01	5.49E+00	10	5.74	0.57	0.81	2.7562E+01
3	BOGR	60.50	3.02E+00	4.68E+01	13	9.92	0.76	0.16	4.7633E+01
3	POSE	11.20	5.60E-01	8.66E+00	14	4.09	0.29	0.37	1.9639E+01
3	SIHY	1.00	5.00E-02	7.73E-01	1	0.13	0.13	0.13	6.2422E-01
3	STCO	48.80	2.44E+00	3.77E+01	14	18.00	1.29	0.37	8.6430E+01
	PER FORBS	0.70	0.03		3	0.76	0.25	1.09	3.65
2	SPCO	0.70	3.50E-02	5.41E-01	3				
	TOTAL		8.36	100.00		3.8640E+01			1.8554E+02

* NOT COMPUTED IN PERCENT COMPOSITION
T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR	83.01
OPPO	42.30
Shrub Prod.	125.31
Total	310.85

PRECIPITATION DATA
RAIN GUAGE NO. SHOSHO ANT SO EXCL 8 AUG 17/76
OCT. 15 TO APR. 15 = 2.06
APR. 15 TO JULY 1 = NR
JULY 1 TO SEPT. 1 = 6.06
SEPT. 1 TO OCT. 15 = 1.68
SEASON TOTAL = 9.80
LONG TERM AVERAGE = 8.70

**No utilization

```
    1014   SHOSHO ANT    EXCL 8 AUG    17/76  CUT    NATIVE

                        NUMBER PLOTS = 20
                          PLOT SIZE 1X1
PLANT  PLANT   TOTAL  AVE.     PERCENT   ABS.   TOTAL   AVE.    WGT./  LBS
CODE   NAME    TRANS  PER-     COMPO-    PLOT   WGT.    WGT.    UNIT   PER
               BASAL  CENT     SITION    FREQ.  GMS/20  /PLOT   BASAL  AC.
               AREA   BASAL              BASE   SQ.FT.  OCCUR-  AREA
               PER-   AREA               20             RENCES
               CENT

  6    *ARTR   101.00 5.05E+00            9
  6    *OPPO    18.00 9.00E-01            3
  6    *PHHO     4.90 2.45E-01            4
   PER GRASS    62.40  3.12              20     24.49    1.22    0.39 117.59
  3    AGSM     30.80 1.54E+00 4.87E+01  20     13.91    0.70    0.45  6.6792E+01
  3    BOGR      7.40 3.70E-01 1.17E+01   9      1.33    0.15    0.18  6.3863E+00
  3    POSE     11.20 5.60E-01 1.77E+01  15      3.74    0.25    0.33  1.7958E+01
  3    STCO     13.00 6.50E-01 2.06E+01   6      5.51    0.92    0.42  2.6457E+01
   PER FORBS     0.80  0.04               3      0.27    0.09    0.34   1.30
  2    SPCO      0.80 4.00E-02 1.27E+00   3
     TOTAL            9.35     100.00           2.4760E+01             1.1889E+02

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS
```

ARTR	91.16
OPPO	23.97
PHHO	2.56
Shrub Prod.	117.69
Total	236.58

```
PRECIPITATION DATA
 RAIN GUAGE NO.        SHOSHO ANT     EXCL 8 AUG      17/76
OCT. 15 TO APR. 15 =   2.06
APR. 15 TO JULY 1  =   NR
JULY 1 TO SEPT. 1  =   6.06
SEPT. 1 TO OCT. 15 =   1.68
SEASON TOTAL       =   9.80
LONG TERM AVERAGE  =   8.70
```

Utilization 10.20

Adjusted Production 246.78

```
1015   SHOSHO ANT NO EXCL 9 AUGUST 17/76  INSIDE NATIVE

                         NUMBER PLOTS = 20
                          PLOT SIZE 1X1
PLANT  PLANT   TOTAL   AVE.    PERCENT  ABS.   TOTAL  AVE.   WGT./  LBS
CODE   NAME    TRANS   PER-    COMPO-   PLOT   WGT.   WGT.   UNIT   PER
               BASAL   CENT    SITICN   FREQ.  GMS/20 /PLOT  BASAL  AC.
               AREA    BASAL            BASE   SQ.FT. OCCUR- AREA
               PER-    AREA             20            RENCES
               CENT

  6    *ARTR  147.00 7.35E+00             9
  6    *OPPO    5.00 2.50E-01             1
  6    *PHHO    5.00 2.50E-01             2
   PER GRASS   60.60  3.03               17    14.25    0.84  0.24  68.42
  3    AGSM    13.00 6.50E-01 2.03E+01   17     8.20    0.48  0.63  3.9374E+01
  3    BOGR    37.30 1.86E+00 5.84E+01    9     3.62    0.40  0.10  1.7382E+01
  3    CAFI     2.60 1.30E-01 4.07E+00    5     0.45    0.09  0.17  2.1608E+00
  3    POSE     5.00 2.50E-01 7.82E+00    9     1.38    0.15  0.28  6.6263E+00
  3    STCO     2.70 1.35E-01 4.23E+00    2     0.60    0.30  0.22  2.8810E+00
   PER FORBS    3.30  0.16                3     0.41    0.14  0.12   1.97
  2    ASPU     3.20 1.60E-01 5.01E+00    3
  2    SPCO     0.10 T        1.56E-01    1
     TOTAL          11.04    100.00          1.4660E+01             7.0393E+01

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE
```

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR		130.33
OPPO		35.36
PHHO		4.71
	Shrub Prod.	170.60
	Total	240.99

```
PRECIPITATION DATA
 RAIN GUAGE NO.         SHOSHO ANT NC EXCL 9 ALGUST 17/76
OCT. 15 TO APR. 15 =    1.76
APR. 15 TO JULY 1  =    NR
JULY 1 TO SEPT. 1  =    5.76
SEPT. 1 TO OCT. 15 =    1.63
SEASON TOTAL       =    9.15
LONG TERM AVERAGE  =    8.56
```

**No utilization

1015 SHOSHO ANT SO EXCL 9 AUGUST 17/76 INSIDE NATIVE

NUMBER PLOTS = 20
PLOT SIZE 1X1

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER-CENT	AVE. PER-CENT BASAL AREA	PERCENT COMPO-SITION	ABS. PLOT FREQ. BASE 20	TOTAL WGT. GMS/20 SQ.FT.	AVE. WGT. /PLOT OCCUR-RENCES	WGT./ UNIT BASAL AREA	LBS PER AC.
6	*ARTR	254.00	1.27E+01		13				
6	*OPPO	6.00	3.00E-01		2				
6	*PHHO	12.00	6.00E-01		3				
	PER GRASS	53.90	2.69		18	23.40	1.30	0.43	112.36
3	AGSM	16.10	8.05E-01	2.95E+01	18	11.33	0.63	0.70	5.4403E+01
3	BOGR	19.20	9.60E-01	3.52E+01	5	3.87	0.77	0.20	1.8583E+01
3	CAFI	3.80	1.90E-01	6.96E+00	5	1.40	0.28	0.37	6.7224E+00
3	POSE	5.30	2.65E-01	9.71E+00	10	1.12	0.11	0.21	5.3779E+00
3	STCO	9.50	4.75E-01	1.74E+01	6	5.68	0.95	0.60	2.7274E+01
	PER FORBS	0.70	0.03		2	0.14	0.07	0.20	0.67
2	SPCO	0.70	3.50E-02	1.28E+00	2				
	TOTAL		16.33	100.00		2.3540E+01			1.1303E+02

* NOT COMPUTED IN PERCENT COMPOSITION
T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR	130.33
OPPO	35.56
PHHO	4.71
Shrub Prod.	170.60
Total	283.63

PRECIPITATION DATA
RAIN GUAGE NO. SHOSHO ANT SC EXCL 9 AUGUST 17/76
OCT. 15 TO APR. 15 = 1.76
APR. 15 TO JULY 1 = NR
JULY 1 TO SEPT. 1 = 5.76
SEPT. 1 TO OCT. 15 = 1.63
SEASON TOTAL = 9.15
LONG TERM AVERAGE = 8.56

**No utilization

1035 SHOSHO ANT EXCL 9 AUGUST 17/76 CUT NATIVE

NUMBER PLOTS = 20
PLOT SIZE 1X1

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER- CENT	AVE. PER- CENT BASAL AREA	PERCENT COMPO- SITION	ABS. PLOT FREQ. BASE 20	TOTAL WGT. GMS/20 SQ.FT.	AVE. WGT. /PLOT OCCUR- RENCES	WGT./ UNIT BASAL AREA	LBS PER AC.
6	*ARTR	184.00	9.20E+00		13				
6	*OPPO	3.00	1.50E-01		1				
6	*PHHO	6.00	3.00E-01		3				
PER GRASS		31.90	1.59		19	10.91	0.57	0.34	52.39
3	AGSM	14.80	7.40E-01	4.61E+01	19	5.66	0.30	0.38	2.7178E+01
3	BOGR	4.80	2.40E-01	1.50E+01	2	1.38	0.69	0.29	6.6263E+00
3	POSE	9.30	4.65E-01	2.90E+01	14	2.53	0.18	0.27	1.2148E+01
3	STCO	3.00	1.50E-01	9.35E+00	2	1.34	0.67	0.45	6.4343E+00
PER FORBS		0.20	0.01		1	0.05	0.05	0.25	0.24
2	SPCO	0.20	T	6.23E-01	1				
TOTAL			11.25	100.00		1.0960E+01			5.2627E+01

* NOT COMPUTED IN PERCENT COMPOSITION
T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR	93.39
OPPO	22.82
PHHO	21.19
Shrub Prod.	137.40
Total	190.07

PRECIPITATION DATA
RAIN GUAGE NO. SHOSHO ANT EXCL 9 AUGUST 17/76
OCT. 15 TO APR. 15 = 1.76
APR. 15 TO JULY 1 = NR
JULY 1 TO SEPT. 1 = 5.76
SEPT. 1 TO OCT. 15 = 1.63
SEASON TOTAL = 9.15
LONG TERM AVERAGE = 8.56

Utilization	3.02
Adjusted Production	193.09

1017 SHOSHO ANT NO EXCL11 AUGUST 16/76 INSIDE NATIVE

NUMBER PLOTS = 20
PLOT SIZE 1X1

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER-CENT	AVE. PER-CENT BASAL AREA	PERCENT COMPO-SITION	ABS. PLOT FREQ. BASE 20	TOTAL WGT. GMS/20 SQ.FT.	AVE. WGT. /PLOT OCCUR-RENCES	WGT./ UNIT BASAL AREA	LBS PER AC.
6	*ARTR	87.00	4.35E+00		10				
6	*OPPO	17.50	8.75E-01		5				
	PER GRASS	108.80	5.44		12	32.43	2.70	0.30	155.72
3	AGSM	19.10	9.55E-01	1.75E+01	12	13.39	1.12	0.70	6.4295E+01
3	BOGR	74.00	3.70E+00	6.78E+01	12	8.94	0.74	0.12	4.2927E+01
3	ORHY	4.80	2.40E-01	4.40E+00	4	4.65	1.16	0.97	2.2328E+01
3	POSE	9.90	4.95E-01	9.07E+00	12	4.33	0.36	0.44	2.0791E+01
3	SIHY	1.00	5.00E-02	9.16E-01	1	1.12	1.12	1.12	5.3779E+00
	PER FORBS	0.40	0.02		2	0.13	0.06	0.32	0.62
2	SPCO	0.40	2.00E-02	3.66E-01	2				
	TOTAL		10.68	100.00		3.2560E+01			1.5634E+02

* NOT COMPUTED IN PERCENT COMPOSITION
T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR	84.55
OPPO	20.90
Shrub Prod.	105.45
Total	261.79

PRECIPITATION DATA
RAIN GUAGE NO. SHOSHO ANT NO EXCL11 AUGUST 16/76

OCT. 15 TO APR. 15 = 1.94
APR. 15 TO JULY 1 = NR
JULY 1 TO SEPT. 1 = 5.68
SEPT. 1 TO OCT. 15 = 1.38
SEASON TOTAL = 9.00
LONG TERM AVERAGE = 8.70

**No utilization

1017 'SHOSHO ANT SO EXCL11 AUGUST 16/76 INSIDE NATIVE

NUMBER PLOTS = 20
PLOT SIZE 1X1

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER-CENT	AVE. PER-CENT BASAL AREA	PERCENT COMPO-SITION	ABS. PLOT FREQ. BASE 20	TOTAL WGT. GMS/20 SQ.FT.	AVE. WGT. /PLOT OCCUR-RENCES	WGT./ UNIT BASAL AREA	LBS PER AC.
6	*ARTR	202.00	1.01E+01		15				
6	*OPPO	7.00	3.50E-01		2				
PER GRASS		78.90	3.94		17	19.55	1.15	0.25	93.87
3	AGSM	14.90	7.45E-01	1.85E+01	17	10.29	0.61	0.69	4.9409E+01
3	BOGR	40.20	2.01E+00	4.99E+01	12	5.75	0.48	0.14	2.7610E+01
3	POSE	16.80	8.40E-01	2.09E+01	12	2.84	0.24	0.17	1.3637E+01
3	STCO	7.00	3.50E-01	8.70E+00	2	0.67	0.33	0.10	3.2171E+00
PER FORBS		1.60	0.08		5	0.60	0.12	0.37	2.88
2	SPCO	1.60	8.00E-02	1.99E+00	5				
	TOTAL		14.47	100.00		2.0150E+01			9.6754E+01

* NOT COMPUTED IN PERCENT COMPOSITION
T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR	84.55
OPPO	20.90
Shrub Prod.	105.45
Total	202.20

PRECIPITATION DATA
RAIN GUAGE NO. SHOSHO ANT SO EXCL11 AUGUST 16/76
OCT. 15 TO APR. 15 = 1.94
APR. 15 TO JULY 1 = NR
JULY 1 TO SEPT. 1 = 5.68
SEPT. 1 TO OCT. 15 = 1.38
SEASON TOTAL = 9.00
LONG TERM AVERAGE = 8.70

**No utilization

```
         1017   SHOSHO ANT    EXCL11 AUGUST 16/76   CUT     NATIVE

                          NUMBER PLOTS = 20
                            PLOT SIZE 1X1
  PLANT   PLANT   TOTAL   AVE.    PERCENT  ABS.    TOTAL   AVE.     WGT./   LBS
  CODE    NAME    TRANS   PER-    COMPO-   PLOT    WGT.    WGT.     UNIT    PER
                  BASAL   CENT    SITION   FREQ.   GMS/20  /PLOT    BASAL   AC.
                  AREA    BASAL            BASE    SQ.FT.  OCCUR-   AREA
                  PER-    AREA             20              RENCES
                  CENT

    6    *ARTR   147.00 7.35E+00             10
    6    *OPPO    24.00 1.20E+00              6
    6    *PHHO     1.00 5.00E-02              1
     PER GRASS  110.80  5.54                 19     17.03    0.90    0.15   81.77
    3     AGSM    22.20 1.11E+00 1.95E+01  19      8.06    0.42    0.36   3.8702E+01
    3     BOGR    80.20 4.01E+00 7.04E+01  12      7.60    0.63    0.09   3.6493E+01
    3     POSE     8.40 4.20E-01 7.37E+00  11      1.37    0.12    0.16   6.5783E+00
     PER FORBS     3.20  0.16                 4      0.43    0.11    0.13    2.06
    2     SPCO     3.20 1.60E-01 2.81E+00   4
        TOTAL          14.30    100.00            1.7460E+01                8.3838E+01

          * NOT COMPUTED IN PERCENT COMPOSITION
          T - TRACE

  PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

     ARTR                                                         69.00
     OPPO                                                         31.28
                                                 Shrub Prod.     100.28
                                                       Total     184.12


  PRECIPITATION DATA
   RAIN GUAGE NO.          SHOSHO ANT    EXCL11 AUGUST 16/76
  OCT. 15 TO APR. 15  =     1.94
  APR. 15 TO JULY 1   =     NR
  JULY 1 TO SEPT. 1   =     5.68
  SEPT. 1 TO OCT. 15  =     1.38
  SEASON TOTAL        =     9.00
  LONG TERM AVERAGE   =     8.70

                                                   Utilization     6.22
                                          Adjusted Production    190.34
          2009   SMILO  EXCL          JULY   20/76  INSIDE NATIVE

                              NUMBER PLOTS = 20
                                 PLOT SIZE 1X1
  PLANT  PLANT  TOTAL  AVE.    PERCENT  ABS.    TOTAL  AVE.    WGT./  LBS
  CODE   NAME   TRANS  PER-    COMPO-   PLOT    WGT.   WGT.    UNIT   PER
                BASAL  CENT    SITION   FREQ.   GMS/20 /PLOT   BASAL  AC.
                AREA   BASAL            BASE    SQ.FT. OCCUR-  AREA
                PER-   AREA             20             RENCES
                CENT

    6    *ARTR  148.00 7.40E+00              8
     PER GRASS   70.40  3.52                18     33.13    1.84   0.47 159.08
    3     AGSM    8.10 4.05E-01 1.13E+01 12      7.89    0.66   0.97  3.7885E+01
    3     BOGR    9.00 4.50E-01 1.25E+01  4      2.16    0.54   0.24  1.0372E+01
    3     POSE   30.70 1.53E+00 4.26E+01 18      9.54    0.53   0.31  4.5808E+01
    3     SIHY   19.20 9.60E-01 2.67E+01  3      8.38    2.79   0.44  4.0238E+01
    3     STCO    3.40 1.70E-01 4.72E+00  4      5.16    1.29   1.52  2.4777E+01
     PER FORBS    0.40  0.02                 1     0.06    0.06   0.15   0.29
    2     SPCO    0.40 2.00E-02 5.56E-01  1
     ANN GRASS    1.10  0.05                 4     0.12    0.03   0.11   0.58
    5     BRTE    0.40 2.00E-02 5.56E-01  1
    5     VUOC    0.70 3.50E-02 9.72E-01  4
     ANN FORBS    0.10  0.00                 1     0.01    0.01   0.10   0.05
    4     PLPA    0.10 T        1.39E-01  1
       TOTAL          11.00    100.00          3.3320E+01              1.5999E+02

          * NOT COMPUTED IN PERCENT COMPOSITION
          T - TRACE

  PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

     ARTR                                                       71.78
     OPPO                                                       17.14
                                                Shrub Prod.     88.97
                                                      Total    248.96

  PRECIPITATION DATA
   RAIN GUAGE NO.       SMILO  EXCL          JULY   20/76
  OCT. 15 TO APR. 15 =   3.16
  APR. 15 TO JULY 1  =   3.98
  JULY 1 TO SEPT. 1  =   1.43
  SEPT. 1 TO OCT. 15 =   2.23
  SEASON TOTAL       =  10.80
  LONG TERM AVERAGE  =   8.57

     **No utilization
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```
      2009   SMILO  EXCL            JULY   20/76  CUT    NATIVE

                            NUMBER PLOTS = 20
                              PLOT SIZE 1X1
 PLANT   PLANT   TOTAL  AVE.   PERCENT  ABS.    TOTAL   AVE.   WGT./  LBS
 CODE    NAME    TRANS  PER-   COMPO-   PLOT    WGT.    WGT.   UNIT   PER
                 BASAL  CENT   SITION   FREQ.   GMS/20  /PLOT  BASAL  AC.
           .     AREA   BASAL           BASE    SQ.FT.  OCCUR- AREA
                 PER-   AREA            20              RENCES
                 CENT

   6    *ARTR    60.00 3.00E+00            3
   PER GRASS     62.20   3.11             19     31.82    1.67  0.51 152.79
   3    AGSM     12.10 6.05E-01 8.12E+00   9      9.20    1.02  0.76  4.4176E+01
   3    BOGR      6.00 3.00E-01 4.03E+00   2      1.71    0.85  0.28  8.2109E+00
   3    POSE     37.10 1.85E+00 2.49E+01  19     12.44    0.65  0.34  5.9733E+01
   3    SIHY      2.00 1.00E-01 1.34E+00   2      1.35    0.67  0.67  6.4823E+00
   3    STCO      5.00 2.50E-01 3.36E+00   2      7.12    3.56  1.42  3.4188E+01
   ANN GRASS     86.60   4.33             12     31.51    2.63  0.36 151.30
   5    BRTE     83.70 4.18E+00 5.62E+01  12
   5    VUOC      2.90 1.45E-01 1.95E+00   5
   ANN FORBS      0.20   0.01              1      0.01    0.01  0.05   0.05
   4    PLPA      0.20 T          1.34E-01 1
      TOTAL            10.45    100.00        6.3340E+01               3.0414E+02

          * NOT COMPUTED IN PERCENT COMPOSITION
          T - TRACE

 PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS
```

ARTR		57.25
OPPO		14.22
	Shrub Prod.	71.47
	Total	375.61

```
 PRECIPITATION DATA
  RAIN GUAGE NO.          SMILO   EXCL              JULY   20/76
 OCT. 15 TO APR. 15 =      3.16
 APR. 15 TO JULY 1  =      3.98
 JULY 1 TO SEPT. 1  =      1.43
 SEPT. 1 TO OCT. 15 =      2.23
 SEASON TOTAL       =     10.80
 LONG TERM AVERAGE  =      8.57
```

Utilization	14.84
Adjusted Production	390.45

```
           2009   SMILO  EXCL           JULY   20/76  INSIDE SPRAY

                              NUMBER PLOTS = 20
                                PLOT SIZE 1X1
PLANT  PLANT   TOTAL  AVE.    PERCENT  ABS.   TOTAL  AVE.    WGT./  LBS
CODE   NAME    TRANS  PER-    COMPO-   PLOT   WGT.   WGT.    UNIT   PER
               BASAL  CENT    SITION   FREQ.  GMS/20 /PLOT   BASAL  AC.
               AREA   BASAL            BASE   SQ.FT. OCCUR-  AREA
               PER-   AREA             20            RENCES
               CENT

  6    *ARTR   127.00 6.35E+00          6
   PER GRASS    44.10  2.20            15     39.45    2.63  0.89 189.43
  3     AGSM    16.20 8.10E-01 1.54E+01 15    20.63    1.38  1.27  9.9059E+01
  3     BOGR     2.00 1.00E-01 1.90E+00  1     0.75    0.75  0.37  3.6013E+00
  3     POSE    16.90 8.45E-01 1.60E+01 11     6.74    0.61  0.40  3.2363E+01
  3     SIHY     3.00 1.50E-01 2.85E+00  2     1.93    0.96  0.64  9.2673E+00
  3     STCO     6.00 3.00E-01 5.70E+00  4     9.40    2.35  1.57  4.5136E+01
   ANN GRASS    61.20  3.06            18     41.07    2.28  0.67 197.21
  5     BRTE    54.70 2.73E+00 5.19E+01 18
  5     VUOC     6.50 3.25E-01 6.17E+00  7
     TOTAL             11.61    100.00        8.0520E+01             3.8663E+02

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS
```

ARTR	12.72
OPPO	0.66
Shrub Prod.	13.38
Total	400.01

```
PRECIPITATION DATA
 RAIN GUAGE NO.        SMILO  EXCL           JULY   20/76
OCT. 15 TO APR. 15 =    3.16
APR. 15 TO JULY 1  =    3.98
JULY 1 TO SEPT. 1  =    1.43
SEPT. 1 TO OCT. 15 =    2.23
SEASON TOTAL       =   10.80
LONG TERM AVERAGE  =    8.57
```

**No utilization

2009 SMILO EXCL JULY 20/76 CUT SPRAY

NUMBER PLOTS = 20
PLOT SIZE 1X1

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER-CENT	AVE. PER-CENT BASAL AREA	PERCENT COMPO-SITION	ABS. PLOT FREQ. BASE 20	TOTAL WGT. GMS/20 SQ.FT.	AVE. WGT. /PLOT OCCUR-RENCES	WGT./ UNIT BASAL AREA	LBS PER AC.
6	*ARTR	38.00	1.90E+00		2				
6	*OPPO	3.00	1.50E-01		1				
	PER GRASS	83.50	4.17		20	27.40	1.37	0.33	131.57
3	AGSM	20.20	1.01E+00	1.64E+01	8	14.95	1.87	0.74	7.1785E+01
3	BOGR	8.50	4.25E-01	6.92E+00	2	0.93	0.46	0.11	4.4656E+00
3	POSE	52.70	2.63E+00	4.29E+01	20	10.08	0.50	0.19	4.8401E+01
3	SIHY	0.10	T	8.14E-02	1	0.19	0.19	1.90	9.1232E-01
3	STCO	2.00	1.00E-01	1.63E+00	1	1.25	1.25	0.62	6.0021E+00
	ANN GRASS	37.00	1.85		19	40.42	2.13	1.09	194.08
5	BRTE	35.20	1.76E+00	2.86E+01	19				
5	VUOC	1.80	9.00E-02	1.46E+00	4				
	ANN FORBS	2.40	0.12		3	0.47	0.16	0.20	2.26
4	PLPA	1.70	8.50E-02	1.38E+00	3				
4	SAKA	0.70	3.50E-02	5.70E-01	3				
	TOTAL		8.19	100.00		6.8290E+01			3.2791E+02

* NOT COMPUTED IN PERCENT COMPOSITION
T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR	10.00
OPPO	22.81
Shrub Prod.	32.81
Total	360.71

PRECIPITATION DATA
RAIN GUAGE NO. SMILO EXCL JLLY 20/76
OCT. 15 TO APR. 15 = 3.16
APR. 15 TO JULY 1 = 3.98
JULY 1 TO SEPT. 1 = 1.43
SEPT. 1 TO OCT. 15 = 2.23
SEASON TOTAL = 10.80
LONG TERM AVERAGE = 8.57

Utilization	30.36
Adjusted Production	391.07

```
             1005   SWEET  WATER  EXCL   AUGUST 2/76   INSIDE ARNO

                              NUMBER PLOTS = 20
                                PLOT SIZE 1X1
  PLANT  PLANT   TOTAL  AVE.   PERCENT  ABS.   TOTAL   AVE.   WGT./  LBS
  CODE   NAME    TRANS  PER-   COMPO-   PLOT   WGT.    WGT.   UNIT   PER
                 BASAL  CENT   SITION   FREQ.  GMS/20  /PLOT  BASAL  AC.
                 AREA   BASAL           BASE   SQ.FT.  OCCUR- AREA
                 PER-   AREA            20             RENCES
                 CENT

    6    *ARNO   85.00 4.25E+00            8
    6    *ASSP   20.00 1.00E+00            3
    6    *CHVI    0.50 2.50E-02            1
    6    *EROV    1.00 5.00E-02            1
    6    *LEPU    4.00 2.00E-01            1
    6    *PHHO   17.00 8.50E-01            3
     PER GRASS   69.90  3.49              11     26.06    2.37   0.37 125.13
    3    AGSM     9.30 4.65E-01 8.60E+00  10      5.36    0.54   0.58  2.5737E+01
    3    CAEL    28.50 1.42E+00 2.63E+01   7      8.55    1.22   0.30  4.1054E+01
    3    KOCR    12.70 6.35E-01 1.17E+01   7      5.63    0.80   0.44  2.7034E+01
    3    STCO    19.40 9.70E-01 1.79E+01  11      6.52    0.59   0.34  3.1307E+01
     PER FORBS   38.30  1.91              16     23.73    1.48   0.62 113.94
    2    ARHO     7.00 3.50E-01 6.47E+00   2
    2    ASMI     6.00 3.00E-01 5.55E+00   2
    2    COPA    21.10 1.05E+00 1.95E+01  16
    2    MAGR     1.00 5.00E-02 9.24E-01   1
    2    PEN      3.00 1.50E-01 2.77E+00   2
    2    TOIN     0.20 T        1.85E-01   1
      TOTAL           11.78    100.00            4.9790E+01              2.3908E+02

          * NOT COMPUTED IN PERCENT COMPOSITION
          T - TRACE

  PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS
     ARFR                                                   15.17
     ARHO                                                    7.62
     ARNO                                                  200.28
     ASSP                                                   91.37
     CHVI                                                   16.65
     EROV                                                    3.12
     LEPU                                                    1.87
     PHHO                                                   25.97
     TELA                                                    7.83
                                             Shrub Prod.   369.88
                                                   Total   608.96

  PRECIPITATION DATA
   RAIN GUAGE NO.          SWEET  WATER  EXCL   AUGUST 2/76
  OCT. 15 TO APR. 15 =    2.58
  APR. 15 TO JULY 1  =    ND
  JULY 1 TO SEPT. 1  =    1.74
  SEPT. 1 TO OCT. 15 =    0.52
  SEASON TOTAL       =    --
  LONG TERM AVERAGE  =    8.89

     **No utilization
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```
 2005   SWEET  WATER  EXCL   AUGUST 02/76  CLT    ARNO

                    NUMBER PLOTS = 20
                      PLOT SIZE 1X1
PLANT  PLANT   TOTAL  AVE.    PERCENT  ABS.   TOTAL   AVE.    WGT./  LBS
CODE   NAME    TRANS  PER-    COMPO-   PLOT   WGT.    WGT.    UNIT   PER
               BASAL  CENT    SITION   FREQ.  GMS/20  /PLOT   BASAL  AC.
               AREA   BASAL            BASE   SQ.FT.  OCCUR-  AREA
               PER-   AREA             20             RENCES
               CENT

  6    *ARNO    74.00 3.70E+00            5
  6    *ARTR    35.00 1.75E+00            3
  6    *CHNA    56.00 2.80E+00            4
  6    *PHHO     0.80 4.00E-02            1
  6    *TECA    13.00 6.50E-01            3
   PER GRASS   131.60  6.58              16    53.00    3.31  0.40 254.49
  3    AGSM      5.80 2.90E-01 4.21E+00   5     1.27    0.25  0.22  6.0982E+00
  3    CAEL     13.30 6.65E-01 9.66E+00   8     2.43    0.30  0.18  1.1668E+01
  3    KOCR     20.00 1.00E+00 1.45E+01   9     7.64    0.85  0.38  3.6685E+01
  3    STCO     92.50 4.63E+00 6.72E+01  16    41.66    2.60  0.45  2.0004E+02
   ANN FORBS     6.10  0.30               8     1.96    0.24  0.32    9.41
  4    ASDI      0.80 4.00E-02 5.81E-01   2
  4    COPA      0.50 2.50E-02 3.63E-01   1
  4    PSTE      4.80 2.40E-01 3.49E+00   8
     TOTAL            15.82    100.00        5.4960E+01             2.6390E+02

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE
```

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARNO	115.91
ARTR	16.42
~~CHVI~~	~~4.49~~
EROV	1.67
LEPU	8.68
~~OPPO~~	~~0.93~~
PHHO	1.45
TECA	6.68
~~Shrub Prod.~~	~~156.23~~
Total	420.13

PRECIPITATION DATA

RAIN GUAGE NO.		SWEET WATER EXCL AUGUST 02/76
OCT. 15 TO APR. 15	=	2.58
APR. 15 TO JULY 1	=	ND
JULY 1 TO SEPT. 1	=	1.74
SEPT. 1 TO OCT. 15	=	0.52
SEASON TOTAL	=	--
LONG TERM AVERAGE	=	8.89

Utilization	12.45
Adjusted Production	432.58

1005 SWEET WATER EXCL AUGUST 2/76 INSIDE ARTR 429

NUMBER PLOTS = 20
PLOT SIZE 1X1

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER-CENT	AVE. PER-CENT BASAL AREA	PERCENT COMPO-SITION	ABS. PLOT FREQ. BASE 20	TOTAL WGT. GMS/20 SQ.FT.	AVE. WGT. /PLOT OCCUR-RENCES	WGT./ UNIT BASAL AREA	LBS PER AC.
6	*ARTR	284.00	1.42E+01		8				
6	*CHVI	10.50	5.25E-01		6				
6	*LEPU	8.00	4.00E-01		2				
6	*PHHO	27.00	1.35E+00		5				
6	*OPPO	1.00	5.00E-02		1				
PER GRASS		137.10	6.85		15	49.07	3.27	0.36	235.62
3	AGSM	5.40	2.70E-01	3.71E+00	7	1.48	0.21	0.27	7.1065E+00
3	CAEL	33.50	1.67E+00	2.30E+01	9	7.31	0.81	0.22	3.5100E+01
3	KOCR	16.70	8.35E-01	1.15E+01	7	4.04	0.58	0.24	1.9399E+01
3	STCO	81.50	4.07E+00	5.61E+01	15	36.24	2.42	0.44	1.7401E+02
PER FORBS		8.30	0.41		2	2.89	1.44	0.35	13.88
2	AST	3.00	1.50E-01	2.06E+00	1				
2	CAS	0.30	1.50E-02	2.06E-01	1				
2	CRFL	5.00	2.50E-01	3.44E+00	2				
TOTAL			23.79	100.00		5.1960E+01			2.4950E+02

* NOT COMPUTED IN PERCENT COMPOSITION

T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARNO	1.64
ARTR	65.05
CHVI	5.05
EROV	0.99
LEPU	5.95
OPPO	0.83
PHHO	27.12
TECA	1.45
Shrub Prod.	108.08
Total	357.57

PRECIPITATION DATA
RAIN GUAGE NO. SWEET WATER EXCL AUGUST 2/76

OCT. 15 TO APR. 15 = 2.58
APR. 15 TO JULY 1 = ND
JULY 1 TO SEPT. 1 = 1.74
SEPT. 1 TO OCT. 15 = 0.52
SEASON TOTAL = --
LONG TERM AVERAGE = 8.89

**No utilization

```
          1005   SWEET  WATER  EXCL   AUGUST 2/76   OUT    ARTR

                          NUMBER PLOTS = 20
                            PLOT SIZE 1X1
 PLANT  PLANT  TOTAL  AVE.    PERCENT  ABS.    TOTAL   AVE.    WGT./   LBS
 CODE   NAME   TRANS  PER-    COMPO-   PLOT    WGT.    WGT.    UNIT    PER
               BASAL  CENT    SITION   FREQ.   GMS/20  /PLOT   BASAL   AC.
               AREA   BASAL            BASE    SQ.FT.  OCCUR-  AREA
               PER-   AREA             20              RENCES
               CENT

   6   *ARNO     2.00 1.00E-01            1
   6   *ARTR   137.00 6.85E+00            8
   6   *CHVI     9.40 4.70E-01            3
   6   *PHHO    23.00 1.15E+00            4
    PER GRASS  154.60   7.73             14     32.70    2.34   0.21  157.02
   3    AGSM    12.10 6.05E-01 7.58E+00  10      5.00    0.50   0.41   2.4008E+01
   3    CAEL    84.30 4.21E+00 5.28E+01  14     14.38    1.03   0.17   6.9048E+01
   3    KOCR    14.70 7.35E-01 9.21E+00   7      2.11    0.30   0.14   1.0132E+01
   3    STCO    43.50 2.17E+00 2.73E+01  14     11.21    0.80   0.26   5.3827E+01
    PER FORBS    5.00   0.25              3      1.56    0.52   0.31    7.49
   2    ARHO2    0.50 2.50E-02 3.13E-01   1
   2    CRFL     2.00 1.00E-01 1.25E+00   1
   2    SPCO     2.50 1.25E-01 1.57E+00   3
      TOTAL          16.55    100.00          3.4260E+01             1.6451E+02

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE
```

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARTR	101.93
CHVI	14.23
LEPU	13.76
OPPO	1.97
PHHO	6.56
TECA	1.84
Shrub Prod.	140.29
Total	304.80

```
PRECIPITATION DATA
 RAIN GUAGE NO.           SWEET   WATER  EXCL    AUGUST 2/76
OCT. 15 TO APR. 15  =     2.58
APR. 15 TO JULY 1   =     ND
JULY 1 TO SEPT. 1   =     1.74
SEPT. 1 TO OCT. 15  =     0.52
SEASON TOTAL        =     --
LONG TERM AVERAGE   =     8.89
```

**No utilization

2010 TWO MILE HILL JULY 21/76 INSIDE NATIVE

NUMBER OF PLOTS
COVER = 200, PRODUCTION = 20
PLOT SIZE 1 FT. X 10 FT.

PLANT CODE	PLANT NAME	TOTAL TRANS BASAL AREA PER-CENT	AVE. PER-CENT BASAL AREA	PERCENT COMPO-SITION	ABS. PLOT FREQ. BASE 200	TOTAL WGT. GMS/200 SQ.FT.	AVE. WGT. /PLOT OCCUR-RENCES	WGT./UNIT BASAL AREA	LBS PER AC.
1	ATGA	895.5	4.48E+00	4.58E+01	122	368.22	3.02	0.41	1.7681E+02
PER GRASS		747.5	3.74E+00		90	615.54	6.84	0.82	2.9556E+02
3	AGCR	129.0	6.45E-01	6.60E+00	27	177.34	6.57	1.37	8.5153E+01
3	POSE	177.0	8.85E-01	9.06E+00	85	84.90	1.00	0.48	4.0766E+01
3	SIHY	425.5	2.13E+00	2.18E+01	90	344.96	3.83	0.81	1.6564E+02
3	UNK1	16.0	8.00E-02	8.19E-01	1	8.34	8.34	0.52	4.0046E+00
PER FORBS		3.10	0.02		5	2.20	0.44	0.71	1.06
2	ALTE	0.8	T	4.09E-02	4				
2	MACA	2.3	1.15E-02	1.18E-01	5				
ANN GRASS		296.50	1.48		135	92.61	0.69	0.31	44.47
5	BRJA	97.7	4.88E-01	5.00E+00	60				
5	BRTE	198.8	9.94E-01	1.02E+01	135				
ANN FORBS		11.20	0.06		23	5.63	0.24	0.50	2.70
4	CEPI	4.1	2.05E-02	2.10E-01	14				
4	HEAN	0.4	T	2.05E-02	2				
4	LARE	0.4	T	2.05E-02	4				
4	LEDE	6.3	3.15E-02	3.22E-01	23				
	TOTAL		9.8	100.00		1.08420E+03			5.20600E+02

* NOT COMPUTED IN PERCENT COMPOSITION
T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

OPPO	1.89
Shrub Prod.	1.89
Total	521.49

PRECIPITATION DATA
RAIN GUAGE NO. TWO MILE HILL JULY 21/76
OCT. 15 TO APR. 15 = 3.90
APR. 15 TO JULY 1 = 3.47
JULY 1 TO SEPT. 1 = 1.12
SEPT. 1 TO OCT. 15 = 2.58
SEASON TOTAL = 11.07
LONG TERM AVERAGE = 9.55

**No utilization

```
        2010   TWO    MILE   HILL   JULY   21/76  CUT    NATIVE

                            NUMBER OF PLOTS
                     COVER = 200, PRODUCTION = 20
                       PLOT SIZE 1 FT. X 10 FT.
 PLANT  PLANT  TOTAL  AVE.    PERCENT  ABS.   TOTAL  AVE.   WGT./  LBS
 CODE   NAME   TRANS  PER-    COMPO-   PLOT   WGT.   WGT.   UNIT   PER
               BASAL  CENT    SITION   FREQ.  GMS/   /PLOT  BASAL  AC.
               AREA   BASAL            BASE   200    OCCUR- AREA
               PER-   AREA             200    SQ.FT. RENCES
               CENT

   1  ATGA   1246.2  6.23E+00 6.50E+01111    498.56    4.49  0.40  2.3939E+02
    PER GRASS  40.9  2.04E-01            21   10.79    0.51  0.26  5.1810E+00
   3  POSE     30.2  1.51E-01 1.58E+00  21     4.53    0.22  0.15  2.1752E+00
   3  SIHY     10.7  5.35E-02 5.58E-01  12     6.26    0.52  0.59  3.0059E+00
    PER FORBS   4.60  0.02               4     3.06    0.76  0.67   1.47
   2  AST       0.8  T        4.17E-02   2
   2  MACA      3.0  1.50E-02 1.56E-01   4
   2  MAGL      0.8  T        4.17E-02   1
    ANN GRASS 599.10  3.00             197   335.73    1.70  0.56 161.21
   5  BRJA    582.3  2.91E+00 3.04E+01197
   5  BRTE     16.8  8.40E-02 8.76E-01  38
    ANN FORBS  26.40  0.13              47     9.55    0.20  0.36   4.59
   4  HEAN     14.8  7.40E-02 7.72E-01  47
   4  LARE      6.4  3.20F-02 3.34E-01  14
   4  LEDE      5.2  2.60E-02 2.71E-01  21
      TOTAL          9.6     100.00        8.57690E+02            4.11836E+02

          * NOT COMPUTED IN PERCENT COMPOSITION
          T - TRACE

 PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

  NO SHRUB DATA RECORDED

 PRECIPITATION DATA
  RAIN GUAGE NO.         TWO     MILE    HILL    JULY    21/76
 OCT. 15 TO APR. 15 =   3.90
 APR. 15 TO JULY 1  =   3.47
 JULY 1 TO SEPT. 1  =   1.12
 SEPT. 1 TO OCT. 15 =   2.58
 SEASON TOTAL       =  11.07
 LONG TERM AVERAGE  =   9.55

  **No utilization
```

```
          1006   UPPER   GOVT   DRAW   AUGUST  9/76  INSIDE NATIVE

                              NUMBER PLOTS = 20
                                PLOT SIZE 1X1
PLANT  PLANT    TOTAL  AVE.   PERCENT  ABS.   TOTAL  AVE.   WGT./  LBS
CODE   NAME     TRANS  PER-   COMPO-   PLOT   WGT.   WGT.   UNIT   PER
                BASAL  CENT   SITION   FREQ.  GMS/20 /PLOT  BASAL  AC.
                AREA   BASAL           BASE   SQ.FT. OCCUR- AREA
                PER-   AREA            20            RENCES
                CENT

  6    *ARTR   317.00 1.58E+01           13
  6    *OPPO     5.00 2.50E-01            1
  6    *PHHO    23.00 1.15E+00            9
   PER GRASS    71.80  3.59              17     34.05    2.00  0.47 163.50
  3     AGSM    44.20 2.21E+00 5.70E+01  17     20.98    1.23  0.47  1.0074E+02
  3     KOCR    27.10 1.35E+00 3.50E+01   9     12.92    1.44  0.48  6.2038E+01
  3     POSE     0.50 2.50E-02 6.45E-01   1      0.15    0.15  0.30  7.2025E-01
   PER FORBS     5.70  0.28               2      1.00    0.50  0.18   4.80
  2     AGGL     0.50 2.50E-02 6.45E-01   1
  2     ARHO2    2.00 1.00E-01 2.58E+00   2
  2     ERPU     1.20 6.00E-02 1.55E+00   2
  2     SPCO     2.00 1.00E-01 2.58E+00   2
     TOTAL            21.12    100.00          3.5050E+01               1.6830E+02

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

    ARTR                                                   106.08
    OPPO                                                    28.59
    PHHO                                                     8.05
                                          Shrub Prod.      142.72
                                               Total       311.02

PRECIPITATION DATA
 RAIN GUAGE NO.        UPPER   GOVT   DRAW   AUGUST  9/76
OCT. 15 TO APR. 15 =    1.43
APR. 15 TO JULY 1  =    5.65
JULY 1 TO SEPT. 1  =    2.71
SEPT. 1 TO OCT. 15 =    0.69
SEASON TOTAL       =   10.48
LCNG TERM AVERAGE  =    9.25

  **No utilization
```

```
22 16    NOV 07  RUNRSAA...
              1006    UPPER   GOVT    DRAW    AUGUST 09/76   CUT      NATIVE

                                  NUMBER PLOTS = 20
                                     PLOT SIZE 1X1
PLANT   PLANT    TOTAL   AVE.     PERCENT  ABS.     TOTAL   AVE.     WGT./    LBS
CODE    NAME     TRANS   PER-     COMPO-   PLOT     WGT.    WGT.     UNIT     PER
                 BASAL   CENT     SITION   FREQ.    GMS/20  /PLOT    BASAL    AC.
                 AREA    BASAL             BASE     SQ.FT.  OCCUR-   AREA
                 PER-    AREA              20               RENCES
                 CENT

  6    *ARTR     93.80 4.69E+00               11
  6    *PHHO      7.00 3.50E-01                6
   PER GRASS     72.00  3.60                  19     16.57     0.87   0.23   79.56
  3     AGSM     35.60 1.78E+00 4.48E+01 19      8.26     0.43   0.23   3.9662E+01
  3     KOCR     23.60 1.18E+00 2.97E+01 14      6.18     0.44   0.26   2.9674E+01
  3     POSE     12.80 6.40E-01 1.61E+01 13      2.13     0.16   0.17   1.0228E+01
   PER FORBS      7.40  0.37                   5      0.94     0.19   0.13    4.51
  2     ARHO2      0.10 T           1.26E-01   1
  2     ERPU       1.00 5.00E-02 1.26E+00   1
  2     MACA       0.20 T           2.52E-01   1
  2     SPCO       6.10 3.05E-01 7.68E+00   5
     TOTAL              9.01    100.00          1.7510E+01               8.4078E+01

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS
```

ARTR		95.44
CHVI		0.48
OPPO		5.81
PHHO		18.23
	Shrub Prod.	119.96
	Total	204.03

```
PRECIPITATION DATA
 RAIN GUAGE NO.          UPPER   GOVT    DRAW    AUGUST 09/76
OCT. 15 TO APR. 15  =     1.43
APR. 15 TO JULY 1   =     5.65
JULY 1 TO SEPT. 1   =     2.71
SEPT. 1 TO OCT. 15  =     0.69
SEASON TOTAL        =    10.48
LCNG TERM AVERAGE   =     9.2S
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Utilization	25.90
Adjusted Production	229.93

```
          1006   UPPER  GOVT   DRAW   AUGUST  9/76  INSIDE SPRAY

                             NUMBER PLOTS = 20
                               PLOT SIZE IXI
PLANT  PLANT   TOTAL   AVE.    PERCENT   ABS.    TOTAL   AVE.    WGT./   LBS
CODE   NAME    TRANS   PER-    COMPC-    PLOT    WGT.    WGT.    UNIT    PER
               BASAL   CENT    SITION    FREQ.   GMS/20  /PLOT   BASAL   AC.
               AREA    BASAL             BASE    SQ.FT.  OCCUR-  AREA
               PER-    AREA              20              RENCES
               CENT

 6   *ARTR      0.10 T                    1 ,
  PER GRASS  194.00   9.70               16     103.83    6.49   0.54 498.56
 3    AGCR     24.80 1.24E+00 1.25E+01    5      22.36    4.47   0.90  1.0737E+02
 3    AGSM     53.20 2.66E+00 2.68E+01   16      29.72    1.86   0.56  1.4271E+02
 3    KOCR     68.40 3.42E+00 3.45E+01   13      34.35    2.64   0.50  1.6494E+02
 3    POFE      6.50 3.25E-01 3.28E+00    4       2.78    0.69   0.43  1.3349E+01
 3    POSE      9.30 4.65E-01 4.69E+00    7       2.88    0.41   0.31  1.3829E+01
 3    STCO     31.80 1.59E+00 1.60E+01    8      11.74    1.47   0.37  5.6372E+01
  PER FORBS     0.50  0.02                1       0.15    0.15   0.30   0.72
 2    SPCO      0.50 2.50E-02 2.52E-01    1
  ANN GRASS     3.70  0.18                4       0.46    0.11   0.12   2.21
 5    BRTE      3.70 1.85E-01 1.87E+00    4
    TOTAL              9.91    100.00          1.0444E+02             5.0149E+02

       * NOT COMPUTED IN PERCENT COMPOSITION
       T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS
```

ARTR		18.84
OPPO		3.13
PHHO		0.83
	Shrub Prod.	22.80
	Total	524.29

```
PRECIPITATION DATA
  RAIN GUAGE NO.         UPPER   GOVT    DRAW    AUGUST  9/76
OCT. 15 TO APR. 15  =    1.43
APR. 15 TO JULY 1   =    5.65
JULY 1 TO SEPT. 1   =    2.71
SEPT. 1 TO OCT. 15  =    0.69
SEASON TOTAL        =   10.48
LONG TERM AVERAGE   =    9.25
```

**No utilization

```
          1006   UPPER   GOVT    DRAW    AUGUST 09/76   OUT     SPRAY

                              NUMBER PLOTS = 20
                                 PLOT SIZE 1X1
PLANT    PLANT    TOTAL    AVE.      PERCENT    ABS.     TOTAL    AVE.     WGT./    LBS
CODE     NAME     TRANS    PER-      COMPO-     PLOT     WGT.     WGT.     UNIT     PER
                  BASAL    CENT      SITION     FREQ.    GMS/20   /PLOT    BASAL    AC.
                  AREA     BASAL                BASE     SQ.FT.   OCCUR-   AREA
                  PER-     AREA                 20                RENCES
                  CENT

  6    *ARTR     128.70 6.43E+00              10
  6    *OPPO       3.00 1.50E-01               1
  6    *PHHO      13.00 6.50E-01               4
   PER GRASS     102.20   5.11                20      25.85     1.29     0.25 124.12
  3     AGSM      42.30 2.11E+00 4.09E+01     20      12.72     0.64     0.30   6.1078E+01
  3     KOCR      37.40 1.87E+00 3.61E+01     17       9.67     0.57     0.26   4.6432E+01
  3     POFE       3.00 1.50E-01 2.90E+00      1       0.28     0.28     0.09   1.3445E+00
  3     POSE      17.50 8.75E-01 1.69E+01     15       2.89     0.19     0.17   1.3877E+01
  3     STCO       2.00 1.00E-01 1.93E+00      2       0.29     0.14     0.14   1.3925E+00
   PER FORBS       1.30   0.06                 2       0.39     0.19     0.30     1.87
  2     SPCO       1.30 6.50E-02 1.26E+00      2
      TOTAL            12.41     100.00            2.6240E+01                  1.2600E+02

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS
  ARTR                                                            29.33
  OPPO                                                             6.71
  PHHO                                                            13.76
                                                   Shrub Prod.    49.80
                                                         Total   175.80

PRECIPITATION DATA
  RAIN GUAGE NO.          UPPER   GOVT    DRAW    AUGUST 09/76
OCT. 15 TO APR. 15  =      1.43
APR. 15 TO JULY 1   =      5.65
JULY 1 TO SEPT. 1   =      2.71
SEPT. 1 TO OCT. 15  =      0.69
SEASON TOTAL        =     10.48
LONG TERM AVERAGE   =      9.25

                                                Utilization     59.69
                                        Adjusted Production    235.49
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3006   WEST   PASTUR EXCL   JULY   07/76  INSIDE NATIVE

                    NUMBER OF PLOTS
              COVER = 200, PRODUCTION = 20
                PLOT SIZE 1 FT. X 10 FT.
PLANT  PLANT   TOTAL  AVE.    PERCENT  ABS.    TOTAL   AVE.    WGT./  LBS
CODE   NAME    TRANS  PER-    COMPO-   PLOT    WGT.    WGT.    UNIT   PER
               BASAL  CENT    SITION   FREQ.   GMS/    /PLOT   BASAL  AC.
               AREA   BASAL            BASE    200     OCCUR-  AREA
               PER-   AREA             200     SQ.FT.  RENCES
               CENT

  1  ATGA      884.8  4.42E+00 6.83E+01 99    352.83   3.56  0.40  1.6942E+02
  6  *ARPE     366.0  1.83E+00          23
  6  *ARSP     174.7  8.73E-01          36
  6  *CFPO     307.3  1.54E+00          45
   PER GRASS   333.6  1.67E+00          96    211.80   2.21  0.63  1.0170E+02
  3  CRHY      121.3  6.06E-01 9.36E+00 83    110.00   1.33  0.91  5.2819E+01
  3  PCSF       70.3  3.51E-01 5.43E+00 54     20.62   0.38  0.29  9.9011E+00
  3  SIHY      124.0  6.20E-01 9.57E+00 96     75.46   0.79  0.61  3.6234E+01
  3  SPCR       18.0  9.00E-02 1.39E+00 17      5.72   0.34  0.32  2.7466E+00
   PER FORBS   24.10   0.12             44     22.97   0.52  0.95  11.03
  2  ALTE       14.2  7.10E-02 1.10E+00 44
  2  CYMO        9.9  4.95E-02 7.64E-01 22
   ANN FORBS   53.10   0.27             48      5.43   0.11  0.10   2.61
  4  CEPI        0.5  T        3.86E-02  3
  4  LATE       25.3  1.26E-01 1.95E+00 41
  4  LEDE        1.0  T        7.72E-02  7
  4  MATA       19.9  9.95E-02 1.54E+00 48
  4  POAV        0.1  T        T         1
  4  PLPA        6.3  3.15E-02 4.86E-01 16
     TOTAL            10.7     100.00         5.93030E+02         2.84755E+02

     * NOT COMPUTED IN PERCENT COMPOSITION
     T - TRACE
```

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS

ARPE		20.67
ARSP		9.07
OPPO		34.29
	Shrub Prod.	64.03
	Total	351.78

```
PRECIPITATION DATA
 RAIN GUAGE NO.        WEST    PASTUR EXCL    JULY    07/76
OCT. 15 TO APR. 15 =   1.62
APR. 15 TO JULY 1  =   2.76
JULY 1 TO SEPT. 1  =   0.60
SEPT. 1 TO OCT. 15 =   1.02
SEASON TOTAL       =   6.00
LONG TERM AVERAGE  =   5.60
```

**No utilization

```
      2006   WEST   PASTUR EXCL   JULY   07/76   OUT    NATIVE

                           NUMBER OF PLOTS
                     COVER = 200, PRODUCTION = 20
                      PLOT SIZE 1 FT. X 10 FT.
PLANT  PLANT     TOTAL  AVE.     PERCENT   ABS.    TOTAL    AVE.    WGT./   LBS
CODE   NAME      TRANS  PER-     COMPO-    PLOT    WGT.     WGT.    UNIT    PER
                 BASAL  CENT     SITION    FREQ.   GMS/     /PLOT   BASAL   AC.
                 AREA   BASAL              BASE    200      OCCUR-  AREA
                 PER-   AREA               200     SQ.FT.   RENCES
                 CENT

  1  ATGA       246.2  1.23E+00 5.24E+01 58    130.59     2.25   0.53   6.2705E+01
  6  *ARPE     1248.0  6.24E+00          168
  6  *OPPO      109.0  5.45E-01           18
   PER GRASS    222.8  1.11E+00           64     80.32     1.25   0.36   3.8567E+01
  3  AGSM         0.7  T        1.49E-01  3      0.48     0.16   0.69   2.3048E-01
  3  BOGR         6.0  3.00E-02 1.28E+00  2      0.76     0.38   0.13   3.6493E-01
  3  CRHY        74.6  3.73E-01 1.59E+01 64     28.79     0.45   0.39   1.3824E+01
  3  POSE        27.4  1.37E-01 5.83E+00 18      4.19     0.23   0.15   2.0119E+00
  3  SIHY       103.1  5.15E-01 2.20E+01 55     43.94     0.80   0.43   2.1099E+01
  3  SPCR        11.0  5.50E-02 2.34E+00  5      2.16     0.43   0.20   1.0372E+00
   ANN FORBS      0.70  0.00              2      0.30     0.15   0.43    0.14
  4  HAGL         0.1  T        2.13E-02  1
  4  MATA         0.3  T        6.39E-02  3
  4  POAV         0.3  T        6.39E-02  2
     TOTAL             9.1      100.00          2.11210E+02              1.01417E+02

        * NOT COMPUTED IN PERCENT COMPOSITION
        T - TRACE

PRODUCTION ESTIMATES OF SHRUBS AND WOODY MAT FORM PLANTS
```

ARPE	24.86
ARSP	1.61
OPPO	6.10
Shrub Prod.	32.57
Total	133.99

```
PRECIPITATION DATA
 RAIN GUAGE NO.          WEST   PASTUR EXCL   JULY   07/76
OCT. 15 TO APR. 15  =   1.62
APR. 15 TO JULY 1   =   2.76
JULY 1 TO SEPT. 1   =   0.60
SEPT. 1 TO OCT. 15  =   1.02
SEASON TOTAL        =   6.00
LONG TERM AVERAGE   =   5.60
```

Utilization 5.80

Adjusted Production 139.79

ER'S CARD

on
shrub

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(Continued on reverse)

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